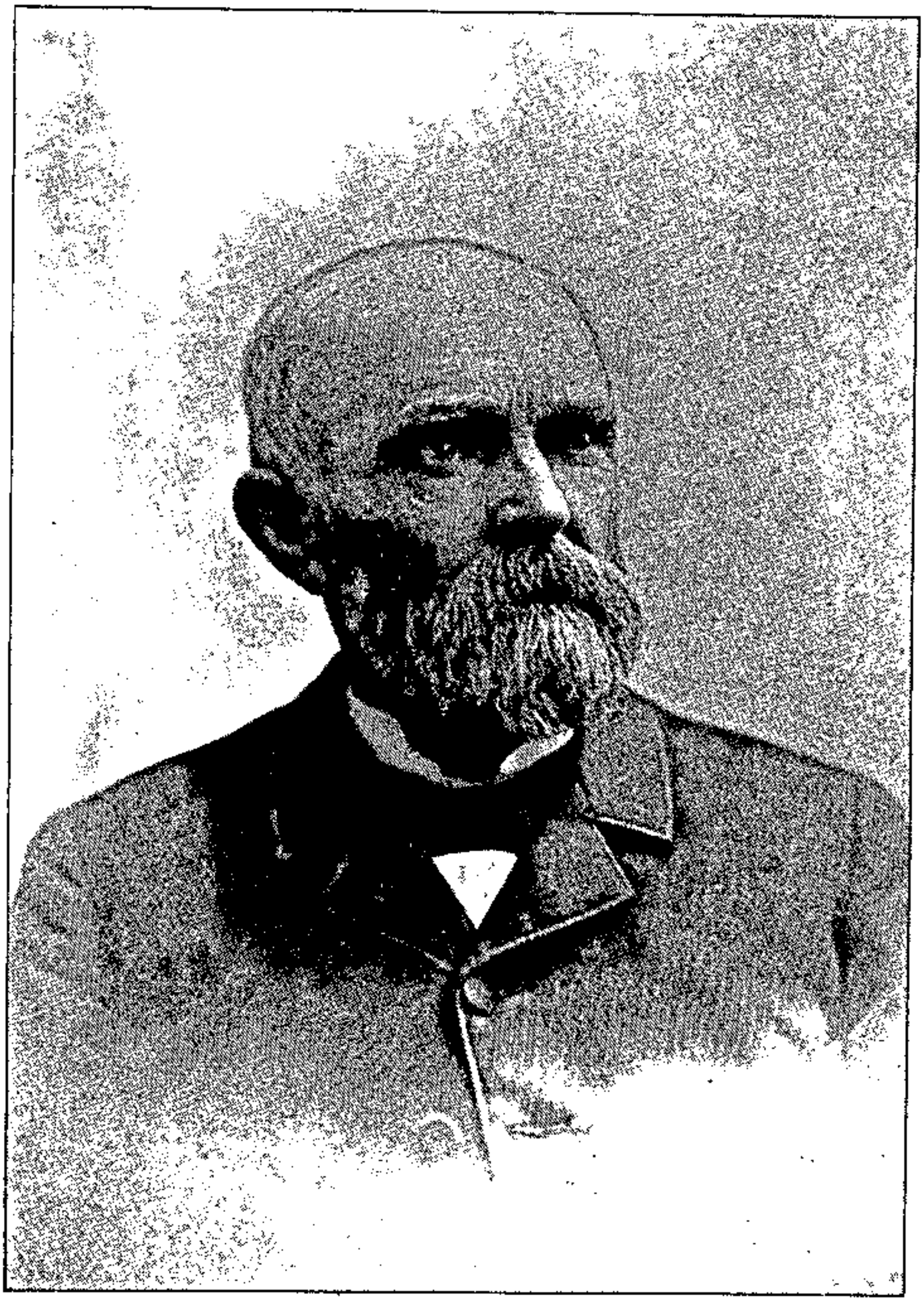
IS THE BIBLE FROM HEAVEN? IS THE EARTH A GLOBE?

SCIENTIFICALLY AND GEOMETRICALLY DEMONSTRATED.





Alex Gleason

IS THE

BIBLE FROM HEAVEN?

IS THE

EARTH A GLOBE?

IN TWO PARTS.

DOES MODERN SCIENCE AND THE BIBLE AGREE?

—ALSO—

AN ACCURATE CHRONOLOGY OF

ALL PAST TIME,

CONTAINING A

CLASSIFICATION OF ALL THE ECLIPSES FROM CREATION.

AUTHENTICATED BY THE BRITISH ASTRONOMICAL ASSOCIATION OF LONDON, ENGLAND.

SECOND EDITION.

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ALEX. GLEASON.

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TO that class of citizens who are known as "Honest Skeptics," and lovers of "demonstrated truth," is this revised volume dedicated by the Author.

We assign no man to oblivion because of a difference of opinion.

Let God and His Works be true, though they prove all men false.

From the Publishers

HOW many extraordinary changes have we witnessed in physical, as well as political and scientifical sciences, and in opinions, as also in the individuals who have borne a conspicuous, and deservedly honored part, in the affairs of the civilized world during the memory of the *pioneers of the present generation!* How important have been the results of the numberless voyages of discovery, revolutions of society, of states and the wars, which have excited an intense interest during that period: an interest which has been the more constantly kept up, as the facility of communication between all the branches of the great human family, which seems, at the same time, to have gone on increasing in proportion to the multitude of events and circumstances; the manifest *evidence* of which *truths* are more strange, interesting, and of far more importance to man, than fiction. Anciently, centuries would elapse ere the most important facts could pass the *barriers* which an imperfect knowledge of the navigation of the ocean caused, or that the diversity of languages be regained, which the Lord in His wisdom confounded at the Tower of Babel, in the year 2217 A. M. or 1782 B. C.

We can but call the inquiring mind to the rapid strides of art and knowledge of every branch. For instance: the characters used in arithmetic, brought into Europe by the Saracens 991 A. D. Algebra introduced into Europe, by the same nationality in 1412 A. D.

The age of Arabic learning lasted about 500 years, and was coeval with the darkest period of the history of Europe.

But, as westward, the sun of science bore its sway,
In the East, he closes the drama of their day.

In comparison with the present state of the world, how small was the theater on which the gods of Grecian fable and the heroes of Grecian history performed their parts in that interesting drama! During the period of Roman history, it is true, the field of civilization had become much more enlarged; but, in our own times, it has extended unto the remotest bounds of the inhabitable earth. In view of these considerations, it becomes necessary for every well informed man, who would keep his relative place during this advance stage of society, to possess himself of all means of knowledge, which might have been dispensed with in former periods; the knowledge of the different sciences and arts, closely connected as they ever have been, having now more common bonds of union than in the preceding ages.

"Many shall run to and fro, and *knowledge shall be increased.*" Whether this running to and fro refers to the rapid and numerous means of transportation of the people from place to place, or the increase of knowledge in the sciences, or the increase of knowledge in reference to those things spoken to the Prophet Daniel (as some people think, which he was commanded to close up "and seal ...., even to the time of the end"); in either case, the fulfilment is manifest. Says an eminent writer in quoting the *Scientific American:*

"Within the last fifty years more advancement has been made in all scientific attainments, and more progress in all that tends to domestic comfort, the rapid transaction of business among men, and the transmission of intelligence from one to another, than all that was done for three thousand years previous put together."

In union there is strength, providing always, that in that union there is harmony.

The publishers of this work have not united their efforts for the purpose of promulgating the *doctrinal tenets* of any theological denomination, or opinions of any set of men; but for the primary purpose of giving to the public, such demonstrated facts, as science from a *critical* Geodetic and Astronomical standpoint may reveal. Upon the religious views of *denominations* we make no attack, but the author and compiler is supposed to give only facts, such as bring to light the infallible Word of God as being in harmony with the science of nature, and there leave every man to choose for himself. The writer of this work has spent much time and means in making research, in the scientific archives of other countries, as well as his own practical exertions to arrive at facts concerning those things which the masses take for granted, and which things are clung tenaciously to, by some persons who regard a *popular* error of more value than an *unpopular* truth.

A great and lasting benefit to the readers of this work will be derived in the study of the chronological work as given in this book and authenticated by the "*British Chronological* and Astronomical Association," of London, England. The work consists of a classification of "All Past Time" by cycles of eclipses and transits, from creation to the present date. These are so tabulated and made so plain, that the boy that can read and comprehend the multiplication table can give the date of

every eclipse, Lunar or Solar, that has transpired since the world began; also, all future, on the same principle; and all of this with the simple knowledge of the first or lower branches of common arithmetic.

With these considerations we commend this work to the lovers of truth and reform.

PUBLISHERS.

PREFACE.

"Why I Believe as I Do," is the Result of Truth Demonstrated.

NO one will deny that by making practical experiments, and collecting undeniable facts, arranging them logically, and observing the results, will give the investigator the greatest satisfaction. "An hypothesis," says Webster, "is a supposition, a proposition, or principle which is supposed, or taken for granted, in order to draw a conclusion or inference for proof of the point in question—something *not proven,* but assumed for the purpose of argument." A system or *theory imagined* or *assumed* to account for known facts or phenomena. This latter method often leads the truth seeker to sad results and severe disappointments. (The writer speaks from experience in this case.) Therefore, it is the purpose of this work to offer such facts as have been demonstrated, and to that extent that they are beyond a doubt, or cite the reader to the most simple means of demonstrating the propositions. Whilst our purpose is not for the sake of "argument," but for sake of the truth, we propose not to exclude all hypothesis, but ask the candid investigator and searcher for truth to give demonstrated and axiomatical (self-evident) facts the preference.

Again, it cannot be reasonably expected that within the province of this small work, that the writer will explain all the phenomena that may arise to the thinking mind, or meet the

fancied objections of the caviller. Therefore we will, in some instances, let one *demonstrated fact* on the point or prime proposition stand as settled, until such a time as the seemingly and known phenomenal objection can be removed or explained by some other cause. As "truth is no part of a lie," we may rest assured that the latter must, sooner or later, die, while the former is immortal. Therefore, we must conclude, and insist, that *"One Demonstrated Fact"* is no less the *Truth*, though there may be a hundred phenomenal existences apparently against it.

"WHAT IS TRUTH?" "WHERE AND WHAT IS THE STANDARD?" This is to be the first and prime interrogation of this work. If there is no standard, then each and every man is left to the merciless winds of doctrine, blown by every street vender or theological quack. There is no book or platform sufficient to contain all of God's truth; the "five senses" are ours to exercise and improve, and while we would not advise independence of spirit, let us open our eyes! Be men, "prove *all* things; hold fast that which is good." If there is a divine being who has given us our senses to act upon, and to judge between right and wrong, then we are responsible to that being in proportion to what he has given us. Having been very skeptical in our early life, and in our experience having found many who require demonstrated and infallible proof of whatever they believed, we propose to give that which we require—PROOF.

READER, THIS IS TO YOU. It will be evident to every thoughtful mind, that truth in the *abstract* (so far as *human* agencies are concerned), is of two opposing natures. In order for you to get the run of my thought, I will say without fear

of refutation, that there never was A COUNTERFEIT WITHOUT A GENUINE. This is axiomatical and needs no proof.

It shall not be the object of this work to promulgate the *creeds* of *men*, but such truth as shall prove to be according to that which we shall, without doubt, find to be the standard, regardless of whatever has been our preconceived opinions. If, in the course of this work, we shall show, that there is a God, a Divine ruler and maker of all things, and that the book which we call the Bible is His will and word to you and to all; then do not chide me if I shall depart from the *text or title* of this work to show some of the mistakes of men. The *Truth* that you and I want, is that which is "according to righteousness;" *not counterfeit.* "God is Truth." Jesus said:—"I am the way, the truth, and the life: no man cometh unto the Father, but by me." "For the wrath of God is revealed from heaven against *all ungodliness* and *unrighteousness of men, who hold the truth in unrighteousness.*" Rom. 1: 18.

In order to satisfy ourselves in reference to certain principles involved, in quotations already advanced, we shall appeal to history, sacred and profane, and shall use the latter, largely to prove the former.

We will now ask you to follow us a few pages, while we examine a few witnesses which we shall have occasion to use, in case we find them unimpeachable, and such as all can accept.

In order to do this work successfully, let us go to "The Law and to the Testimony" (Isa. 8: 20.) and call on some of the Prophets that have claimed to write, "not by the will of man," but as "moved by the Holy Ghost." (See II Peter 1: 20, 21.)

Prophecy is history in advance (Webster), and the longest line of this history in advance, which is given in summary and

detail, having reference to *time,* is found in the book of Daniel (Dan. 2: 7, 8, 9). This advance history commenced with the first Universal Kingdom, with Nebuchadnezzar, B. C. 603 years, and is to terminate with the Fifth Universal Kingdom of God, which is to consume *all* other Kingdoms and stand forever, this Kingdom of the most "High," with His saints, and *all* dominions in honor and obedience.

Now if we shall find no *discrepancy* in this history, by going over it carefully, and bringing other witnesses, sacred and profane, from the first date (603 B. C.) to the present, what shall we conclude as to the inspiration and divine infallibility of the witnesses' testimony? We will leave you to judge.

With these considerations, let us examine the history, *sacred* and *profane,* for a few moments only, and observe the rise and fall of the four *Universal Kingdoms* of this earth. When we have examined these two histories, if we shall find them to harmonize, then we can no more deny their truthfulness, in the prime affirmation, than we can deny our own existence.

We will further add, and frankly confess, that the writer is what some might justly term a *religious liberalist;* believing that every man is endowed with a God-given right to worship God according to the dictates of his conscience, *providing, always,* that he will allow the *Spirit* and *Word,* which always agree, to govern and *enlighten* his *conscience,* and without the reception of the two God-given entities; the inner man has not reached the standard that would meet the pleasure of his Maker, and he is therefore amenable to the Creator only.

We have heard say, that "All religious truth is derived

from the Bible." True! We also read, "Every Scripture is inspired of God." (II Tim. 3: 16, N.V.) "Without Faith it is impossible to please God."

> **But when fanatic zeal to man is wedded fast,**
> **To some dear falsehood he clings at last.**

And yet, unreasonable men will charge the Bible with all the false doctrines the world contains.

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IS THE BIBLE FROM HEAVEN?

PART FIRST.

CHAPTER I.

Tradition Against Truth and Reform.

THE learned historian, *Archibald Bower*, says, "To avoid being imposed upon, we ought to treat tradition as we do a notorious liar, to whom we give no credit, unless what he says is confirmed to us by some person of undoubted veracity. False and lying traditions are of no recent date, and the greatest men have, out of a pious credulity, suffered themselves to be imposed upon by them."—Hist. of the Popes, Vol. I, p. 1.

We would, with due respect to great and good men, give their opinions full value, yet not any the more so because of their sayings being ancient; let them be proven.

Paul advised Titus to "Not give heed to the Jewish fables, and commandments of men, that turn from the truth."—*Titus* 1: 14.

Since time immemorial until now, every *advance step* in reform has been opposed by those in favor with *authorized* versions, traditions, fables, and opinions of men; yet, while we consider this work limited, we cannot refrain from giving a few samples of this fact. The learned and famous Dr. Eck spoke against Luther as follows:

"I am surprised at the *humility* and *modesty* with which

the reverend doctor undertakes to oppose, alone, so many *illustrious fathers,* and pretends to know more than the Sovereign Pontiff, the councils, the doctors, and the universities. It would be surprising, no doubt, if God had hidden the truth from so many saints and martyrs until the advent of the reverend father."—D'Aubigne's Hist. Ref., Vol. II, p. 59.

Sebastian Meyer gives the following refutation of the above: "To have a thousand years wrong will not make us right for one hour, or else the Pagans should have kept to their creed."—Id, Vol. II, p. 427.

"An error is no better for being common, nor the truth the worse for having lain neglected; and, if it ever be put to vote anywhere in the world, I doubt, as things are managed, whether truth would have majority, at least while the authority of men, and not the examination [demonstration] of things, must be its measure."—Essay on Human Understanding, Book 4, Chap. III, Sec. 6, by John Locke, the great Christian philosopher.

We shall hold that truth is of God; that it is righteousness, and not iniquity. The opposite of truth is anti-Christ; and, to say the least, to those acquainted with the history of man, it is as old as man, and, we believe, older by far. If, then, we shall produce demonstrated evidence of our position, do not question the same by saying: Why then has this universally accepted theory been so long believed and taught? Great names and titles we find enrolled on each side of all controversies; and if these authenticate hypothetical tradition, and satisfy weak consciences, then there is no error in the religious buffoonery of *Pagans, Mahometans,* or any other religion that fancy may bring forth, and it may be received with sacred and profound reverence.

History: its Moral and Philosophical Relations.

We can reason intelligently only from what we know, and without demonstrated facts our fancied knowledge is worse than ignorance. With those who take no delight in true history, the proverb may apply: "Where ignorance is bliss, it is folly to be wise."

It has been quite often remarked that all history is uncertain. Were this true to the full extent, there would be no use in attempting to show the value of that which may be known with certainty. While it is true that the detail or minute events of profane historians may disagree, it is also equally true that the more valuable part of history rests on immovable monuments, which admit of no uncertainty in their prime character and results. To the student of history, sacred or profane, the decline and fall of great empires is no less important and instructive than their origin and rise. To him who wishes to know his approximate whereabouts in the history of mankind, its physical duration, and that of his fellow beings, the pleasure and permanent satisfaction does not consist in highly colored pictures of crime, nor eloquence or rhetoric of the writer, but truth in its simplicity.

The facts of *four universal monarchies* or kingdoms having existed on the earth in times of the past—Babylon, Medo-Persia, Grecia and Rome—no person of ordinary intelligence will deny. History and historians, pyramids and monuments, and excavated ruins, relics, etc., are too numerous for any successful controversy on the part of the skeptic. Further, that so sure as there existed the first Universal Kingdom, so sure there existed Nebuchadnezzar, the King of Babylon, and Daniel, a Hebrew captive. To Nebuchadnezzar (in a dream) was first given, and in the symbol of an image in the form of

a man, the *future history* of the world and the destiny of mankind.

We will notice for a few moments some of the facts concerning this history in advance. *Seven hundred and twelve years before Christ*, while Baladan was king, it was foretold by the Prophet Isaiah, that all of the treasures of his house, and the house of the Lord, together with Hezekiah's sons that should issue from him, should be carried to Babylon. (See Isaiah, 39.) *One hundred and five years later*, the idolatrous monarch, Nebuchadnezzar, was upon the throne ready to fulfil the Word of the Lord, so long before spoken by His servant and prophet Isaiah. (See Dan. 2:1.) "The Lord is not slack concerning His promise, as some men count slackness; but is long suffering toward us, not willing that any should perish, but that all should come to repentance." When God *speaks* it is as literally the truth before fulfilment, to our eyes, as it is after, for in reference to His word of promise: "*One day* is with the Lord as a thousand years, and a thousand years as one day."

The Lord's wisdom and power above all kings, kingdoms, prelates or powers, was manifest in bringing, first, His own people into bondage under the idolatrous monarch which He had made ruler of the then habitable world. In this very act, God not only made manifest His own power and wisdom throughout the then known world, but to all coming generations, "until the God of Heaven should set up His everlasting kingdom possessed by the saints of the most High."

In order to show the *divine history* of man and its ultimate termination and its relation to history, past, present and future, we will necessarily have to enter somewhat into detail, in noticing their parallel course and the harmony existing between the two. "The secret things belong unto the Lord our God; but those things that are revealed belong unto us and to our

children forever, that we may do all the words of this law." Deut. 29: 29. Also John 5: 39. Jesus commands us to search the Scriptures. "Surely the Lord God will do nothing, but He revealeth His secret to His servants the prophets." Amos 3: 7.

While it is literally true that God will do nothing but He revealeth His secret to His servants, the prophets, He is just as able and willing to show to the idolatrous king on his throne, His love for him and the devotees of the king's realm, and reveal through God's own chosen vessel His purpose concerning the human family.

We will now give a synoptical description of Nebuchadnezzar and his kingdom, according to the well-known historical records of various writers, after which we will give the Scriptures an interrogation, letting them give their own interpretation.

According to the testimony of the "greatly beloved" prophet of God (Daniel), Nebuchadnezzar had a wonderful dream in the year 603, B. C., in which he beheld the kingdoms of earth symbolized by a Great Image. This great image represented by the Head of Gold, Babylon; Breast and Arms of Silver, Medo-Persia; Thighs and Sides of Brass, Grecia; Legs of Iron, the Fourth or Roman Kingdom. Dan. 2: 31–40. The forty-second verse represents the kingdom divided into ten parts by the feet and toes.

Let us look for a moment at the most wonderful empire the earth has ever contained or known, of which the city of Babylon was the metropolis, and the talented king, Nebuchadnezzar at its head. This kingdom arose from the old Assyrian empire founded by Nimrod, the great-grandson of Noah. Gen. 10: 8-10 (margin). In prophecy it dates from B. C. 677, because it then became connected with the people of God by the

capture of the king of Judah and his people. It reached the height of its glory under Nebuchadnezzar, to whom this dream was given. The metal used to represent this kingdom is the finest of all the metals, and fitly represents the kingdom, as it was, in riches and splendor, the grandest of all earthly kingdoms.

The city of Babylon, its capital, was laid out in a perfect square, fifteen miles on each side; consequently the whole circuit of the walls was sixty miles. These walls were three hundred and fifty feet high and eighty-seven feet thick, with a mote, or ditch, outside of the city of the same cubic capacity as the wall, and filled with water. It had fifty streets, twenty-five running each way, one hundred and fifty feet wide and fifteen miles long, paved with polished stones. Over one hundred towers rose above the battlements of the walls. It contained two hundred and twenty-five miles of inclosed surface, laid out in luxuriant pleasure grounds and gardens, interspersed with magnificent dwellings. The river Euphrates ran through the center, with a wall on either side equal to the outer walls, making thirty miles of river wall, or ninety miles of wall in all: one hundred and fifty gates of solid brass, and hanging gardens rising terrace above terrace, to the height of the walls themselves. Among the large buildings was the temple of Belus, three miles in circumference at the base; also the royal palaces, one three and one-half and the other eight miles in circumference, connected with each other by a subterranean tunnel under the river and its walls.

Never before nor since has the earth seen the equal of this city. See "Rollin," or Goodrich's "History of All Nations."

Babylon was succeeded by Medo-Persia, represented by the breast and arms, B. C. 538, when Babylon was taken by Cyrus, and Darius the Median was placed upon the throne.

Isa. 44:28; Dan. 4:30, 31. This was in turn succeeded by Grecia, represented by the brazen portion of the image, when Darius Codomannus was overthrown by Alexander the Great, at the battle of Arbela, B. C. 331. This Grecian kingdom, after passing through various changes, was finally all absorbed by the mighty empire of Rome, which became connected with God's people by the famous league between the Jews and Romans, B. C. 161. We understand from verse forty-two that this fourth kingdom was to be divided into ten parts; and we learn from "Gibbon's Rome" and others that this kingdom was divided between the years A. D. 356 and 483 into ten divisions.

Let the reader bear in mind that we are now examining *symbolical and typical Scripture,* and if we take the plan that God has ordained and given in His Word we shall make no mistake. First, let us ascertain from God's Word what this rule is and then proceed, and I feel assured, kind reader, that if you are a lover of truth and desire the fruit of its inevitable glory and final triumph, you will find satisfaction to the fullest extent.

Rules of Interpretation of Scripture.

a. "If there arise among you a prophet or a dreamer of dreams and give thee a sign or a wonder, and the sign or woncome to pass. ...." Shall we believe this sign or wonder, although it is apparently true? *Ans.* (Isaiah 8: 20.) "To the law and to the testimony; if they speak not according to this Word, it is because there is no light in them."

b. When a position is taken in regard to a text of Scripture, and that text corroborates all others in the Bible, on the same point in question, then we may feel safe to trust our faith on the said portion of Scripture.

c. Whatever disagrees with an *axiom* or a *demonstrated fact*, whether it be in the order of morals, philosophy or science, it is "falsely so called," and is never harmless, and sooner or later will reap its reward.

d. The Bible is its own expounder and does not *necessarily* require outside matter to prove itself; man is simply to give the Word.

e. All terms used by the inspired writers of the Bible must mean the same in one place as they do in another, providing that the same subject is before the writer of the Word.

f. When symbolical or typical language is used, it is so stated; and when so taken and so understood, it is the more emphatic and harmonious to the lover of truth. Let us examine the Word regarding these principles and we will find it to harmonize with every well-established principle of truth. And, reader, you and I have the same right to understand that Word that was given *"unto us and our children forever,"* that the priest, the judge or the king upon his throne has, for this Word is to judge us at the Last Day, and the gates of Hades shall not prevail against it, neither shall it return unto its author void.

We will now interview a few passages of the Bible (falsely so-called pretentious book), after which we will bring forward those who have written for and against it, and weigh them by their own standard or merits.

A Bible Reading.

1. What does Peter tell us we are to *know first?* 2. Pet. 1: 20.—"Know this first, that no prophecy of the Scripture is of any private interpretation."

2. How did this prophecy come? (New. V.) 2. Pet. 1:

21.—"For no prophecy ever came by the will of man; but men spake from God, being moved by the Holy Spirit."

3. Since it came by the Holy Spirit of God; for whose *special benefit* is it? 2. Tim. 3: 16, 17.—Every Scripture inspired of God is also profitable for teaching, for reproof, for correction, for instruction which is in righteousness: that the man of God may be complete, furnished completely unto every good work." (N.V.)

4. Does not the Scripture belong to the laity as well as to the priesthood? Deut. 29: 29 (last clause).—"But the things that are revealed belong unto us and our children forever, that we may do all the words of this law."

5. By what are we finally judged? S. John. 12: 48.—"He that rejecteth me, and receiveth not my sayings, hath one that judgeth him: the Word that I spake, the same shall judge him in the last day."

A Prophetic Bible Reading on Daniel and Revelation to show the literal fulfilment of the Word:

"Behold the former things are come to pass, and new things do I declare: before they spring forth I tell you of them." Isa. 42: 9.

6. Who was Daniel? Dan. 1: 6.—"Now among these [captives] were of *the children of Judah*, Daniel, Hananiah, Michael and Azariah."

7. Who was Nebuchadnezzar? Dan. 1: 1.—"In the third year of the reign of Jehoiakim, king of Juda, came *Nebuchadnezzar, king of Babylon,* unto Jerusalem and besieged it."

8. When did Nebuchadnezzer have a notable dream? Dan. 2: 1.—"And *in the second year* (B. C. 603, margin) of the reign of Nebuchadnezzar, *Nebuchadnezzar dreamed dreams,*

wherewith his spirit was troubled and his sleep brake from him."

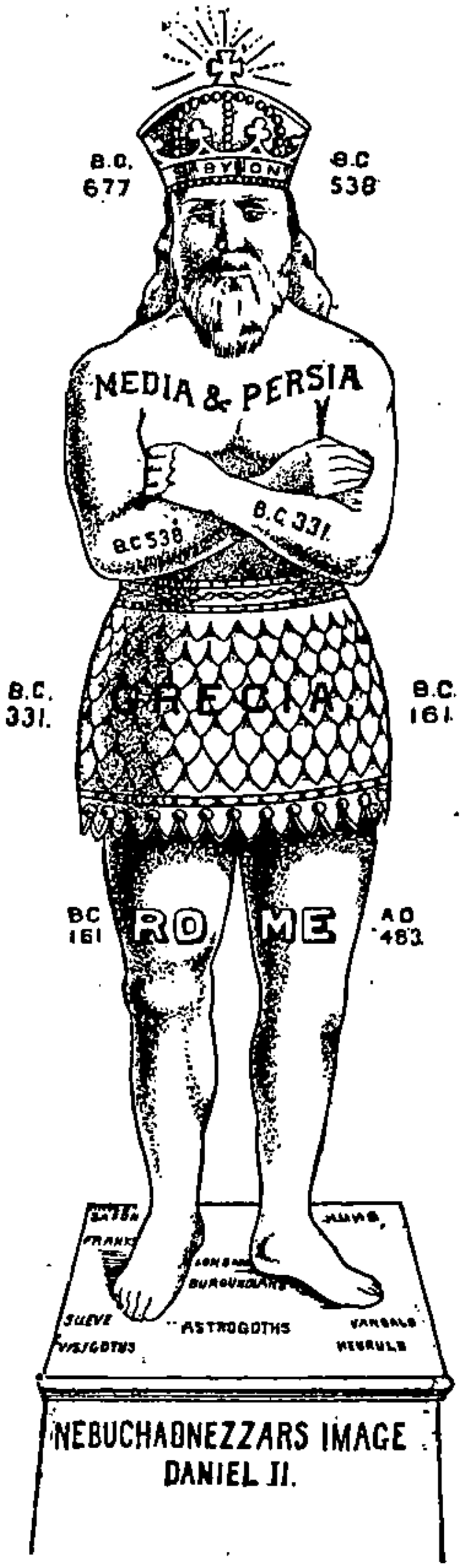


Fig. 1.

9. What did King Nebuchadnezzar see? Dan. 2: 31.—"Thou, O King, sawest and behold *a great image.*"

10. What was the image composed of? Dan. 2: 32, 33.—"This image's head was of *fine gold,* his breast and his arms of *silver,* his belly and his thighs of *brass,* his legs of *iron,* his feet part of *iron* and part of *clay.*"

11. What became of this image? Dan. 2: 34, 35.—"Thou sawest till that a stone was cut out without hands, which smote the image upon his feet *that were of iron and clay,* and brake them to pieces. Then was the iron, the clay, the brass, the silver and the gold broken together, and became like the chaff of the summer threshing floors; and *the winds carried them away, that no place was found for them:* and the stone that smote the image became a great mountain and filled the whole earth.

NOTE—By comparing Jer. 25: 32, 33 with Dan. 7: 2 and Rev. 17: 15, we understand that the *winds* are a symbol of *war and strife:* hence, we conclude it is the latter that God uses to depopulate and destroy the *political world.*

12. What did the image represent? Dan. 2:37,38.—"Thou, O King, *art* a king of kings: for the God of heaven hath given thee a kingdom, power, and strength, and glory. . . . . Thou art this head of gold." [As "king" implies a kingdom, and the following verse says: "After thee shall arise another kingdom." We therefore understand the gold to represent Nebuchadnezzar's kingdom and not Nebuchadnezzar in person.]

13. Who took the kingdom following Nebuchadnezzar? Dan. 5:31.—"And *Darius the Median* took the kingdom, being about threescore and two years old." (B. C. 538.)

14. What other direct testimony have we for the consecutive kingdoms, following Nebuchadnezzar's kingdom? Dan. 8:20,21.—"*The ram* which thou sawest having two horns *are the kings of Media* and *Persia*. And *the rough goat is the king of Grecia:* and the *great horn* that is between his eyes *is the first king.*" [History tells us that Alexander the Great was the first king of Grecia; therefore, we have direct and positive testimony for the three first universal kingdoms of the world.]

15. What represents the Fourth Kingdom? Dan. 2:40.—"And the *Fourth Kingdom* shall be strong as *iron:* for as much as *iron* breaketh in pieces and subdueth all things: and as iron that breaketh all these, shall it break in pieces and bruise."

16. What other specifications designate the Fourth Kingdom? Dan. 2:41.—"And whereas thou sawest *the feet and toes, part of potter's clay, and part of iron,* the kingdom shall be *divided.*"

17. Did the Fourth Kingdom bear rule over all the *then known world?* Luke 2:1.—"And it came to pass in those days, that there went out a decree from Cæsar Augustus that *all the world should be taxed.*" (Margin enrolled.) The fact that: the Roman Empire had power to enroll for taxation the whole world, shows that his jurisdiction extended thus far.

History in abundance corroborates this. Gibbon's "Decline and Fall of the Roman Empire," Vol. 1. Chap. 3, at the close says: "The Empire of the Romans *filled the world;* and when that empire fell into the hands of a single person, the world became a safe and dreary prison for his enemies." .... To resist it was fatal, and it was impossible to flee. *"Wherever you are,"* said Cicero to the exiled Marcellus, *"remember you are equally within the power of the conqueror."*

18. Whereas we have learned from Verse 41 that the Fourth Kingdom was to be divided. We ask, were these nations ever to have another universal union? Dan. 2:43.—"Whereas thou sawest iron mixed with mirey clay; they shall mingle themselves with the seed of men: but *they shall not cleave one to another*, even as iron is not mixed with clay."

19. By the divisions of the feet and toes we understand there should be ten corresponding divisions of the nations. Was this true? The list which Bishop Llyod has given is as follows: "1, Huns, about A. D. 356; 2, Ostragoth, A. D. 410; 3, Visigoths, about A. D. 378; 4, Franks, A. D. 410; 5, Vandals, A. D. 407; 6, Suevians and Alans, A. D. 407; 7, Burgundians, A. D. 407; 8, Herules, A. D. 476; 9, Saxons, about the same time 476; 10, Longobards or [Lombards,] about 483–484 A. D." Dr. Gill's comments on Dan. 7:24.

20. We learn that these several divisions of Rome were accomplished by the incursions of barbarous tribes from the north of Europe who conquered the empire. (See Gibbon.) And these kingdoms still exist under the form of various kingdoms of Europe; though there are some of them known by other names.

21. But what happens to these kingdoms of the *earth*, prior to the setting up of the *Fifth Universal Kingdom?* Dan. 2:44.—"And in the days of these kings (or kingdoms) shall

the God of heaven set up a kingdom, which shall never be destroyed."

22. What is to become of the inhabitants of the earth, and their earthly titles? (Kings, etc.) Dan. 2: 34, 35.—"Thou sawest till that a stone was cut out without hands, which smote the image upon his feet that were of iron and clay, and brake them to pieces."

23. What country do they inhabit? (35.)—"Then was the iron, the clay, the brass, the silver and the gold broken to pieces together, and became like the chaff of the summer threshing floors; *and the wind carried them away that no place was found for them.*"

24. And what was it that filled the earth after they left it? (Last clause 35th verse.) And the *stone that smote the image* became a great mountain and *filled the whole earth.*

25. What was this Stone or Rock that filled the whole earth? *1. Cor. 10:1–4.*—"Moreover, brethren, I would not that ye should be ignorant, how that all our fathers' were under the cloud, and did all pass through the sea. (2) And were all baptized unto Moses in the cloud, and in the sea. (3) And did all eat the same spiritual meat. And did all drink the same spiritual drink: for they drank of that spiritual Rock that followed them; *and that Rock was Christ.*" Who can doubt it?

26. Who, does the Psalmist say, are given to Christ for a possession? Psalms, 2: 8.—"Ask of me and I shall give the *heathen for thine inheritance,* and *the uttermost parts of the earth for thy possession.*"

27. What will he do with them? *Ninth verse.*—"Thou shalt *break them with a rod* of *iron; thou shalt dash them* in *pieces like a potter's vessel.*"

28. What is said in Job in regard to the wicked? Job 18:17, 18, 21.—"*His rememberance* shall *perish from the earth,* and he

shall have no name in the street. (18) He shall be driven from light into darkness, and *chased out of the world.* (21) Surely such are the dwellings of the wicked, and this is the place of him that knoweth not God." [Out of the world.]

29. But what does the Psalmist say in behalf of the righteous? Ps. 37: 29.—"The righteous shall inherit the land and *dwell therein forever.*"

30. Once more, let us ask Daniel in regard to the nature of the *"Fifth Universal Kingdom"?* Dan 7: 27.—"And the kingdom and dominion, and the greatness of the kingdom under the whole heaven, shall be given to the people of the saints of the most High whose kingdom is an everlasting kingdom, and all dominions shall serve and obey Him." Thus, we see that the *inspiration of the Scriptures* is *vindicated* by comparing spiritual things with spiritual. Prophecy is history in advance. Further, we shall find that the Bible is not only "The Truth," but it is the whole truth, and the *breathings* of God through his chosen prophets. (See question No. 2, Second Pet. 1: 21.)

31. Then, what is God, or a transcript of his character? *St. John 1:1.*—"In the beginning was the Word, and *the Word* was with God, and *the Word was God.*"

32. What did the Word become? *John 1:14.*—"And *the Word was made flesh,* and dwelt among us."

33. What was in the Word? (4th verse, 1st clause.) *"In Him was life."*

34. What was life? (4th verse, last clause.) "And *the life was the light of men.*"

35. Can we get that *life* and *light? 1, John 5:12.*—"He that hath the *Son hath life;* and he that hath *not* the Son of *God hath not life.*"

36. How may we know that we have the Light and Life? *1, John, 2:4, 5.*—"He that sayeth, I know him, and keepeth not

his commandments, is a liar, and the truth is not in him. (5) But *whoso keepeth his word*, in him verily is the love of God perfected; *hereby know we* that we are in Him."

37. When shall we partake of this glory? *Col. 3: 4.*—"*When Christ who is our Life, shall appear, then shall ye also appear with him in glory.*"

Thus with the poet we may safely say,

"Westward the course of empire takes its way;
The *first four acts* already past,
A fifth shall *close* the drama with the day;
Time's noblest offspring is the last."

Fully the inspiration of the Bible is vindicated by those only, who study and compare the way marks of history, sacred and profane.

But to evade the manifest fulfilment of the Scriptures, infidels and skeptics have affirmed an interpolation of the prophecies, and denied the *inspired infallibility* of the book we call the Bible. Therefore, before quoting largely from the book, let us examine its merits:

We will first commence with that which is apparent to all, and needs no proof. When were the *Evidences of the Inspired Word* written?

"First, there is an abundance of Bibles in the land to-day; nearly all the civilized nations of the earth accept it as the inspired word of God, and claim to found their laws on it, to some extent at least. It is estimated that about four hundred millions of people receive and believe it. Is there any other book so generally read, so generally loved, so widely diffused? If you cannot name any book which in these respects equals the Bible, then it stands out clear and distinct, and separate from all other authorship; and with an increased emphasis comes the question: Who wrote it?" Fables of Infidelity, p. 82.

We will now trace this Bible back a little, questioning the

reformers and fathers for a few centuries: John Wesley, where did you get the Bible? Did you or your father get this up? "No, the Episcopal Church had the same book for two hundred years before I was born, just the same as I have it to-day."

"About three hundred years ago King James of England authorized some forty or fifty chosen men to translate the Bible into English; therefore was not he the author? No. Wycliff translated the Bible into English three hundred years prior to King James' time, and there is no vital discrepancy in the two. Three hundred and fifty years ago Martin Luther translated the same Bible into the German language, and this tells the same story; no interpolation yet. There are now nine hundred and seventy entire manuscripts of the Greek Testament, of which *forty-seven* are more than one thousand years old." History of the Bible by Prof. Stowe, p.63. Among them is the Vatican manuscript, written about A. D. 300.

"Here, then, we have accessible to us manuscript copies of the Greek Testament, the most ancient reaching to an age of fifteen centuries. The proudest and most costly architectural structures of men have, within that period, either crumbled and mouldered away, or become obsolete and unfit for their original use, though built of the most solid materials and put together with the utmost care, while we of this age can read the same fragile page of books which were in the *hands* of *men* forty-five and fifty generations before us." Prof. Stowe, p.78.

"It is about two hundred years from the death of the Apostle John to the first full manuscript we have of the whole New Testament, though we have fragments and quotations from the very earliest periods, from the time of John himself." From the above we see that the same Bible was written and read at least fifteen hundred years ago. But one very important era to notice was the Council of Nice, A. D. 325.

We quote the following paragraphs from the lectures of H. L. Hastings, editor of *The Christian*, Boston, on the "Inspiration of the Bible," as delivered to the Young Men's Christian Associations of Massachusetts, in the Town hall at Spencer, October 13, 1881:

"I have on my library shelves between twenty and thirty volumes, containing about twelve thousand pages of writings of different Christian authors who wrote *before* A. D. 325, when the Council of Nice was held. The books are full of Scripture. Those writers had the same books of Scripture which we have; they quoted the same passages which we quote; they quoted from the same books from which we quote. Origen, who wrote a hundred years before the Council of Nice, quotes five thousand seven hundred and forty-five passages from all the books of the New Testament. Tertullian, A. D. 200, makes more than three thousand quotations from the New Testament books. Clement, A. D. 194, quotes seven hundred and sixty-seven passages. Polycarp, who was martyred A. D. 165, after having served Christ for eighty-six years, in a single epistle quoted thirty-six passages. Justin Martyr, A. D. 140, also quotes from the New Testament, to say nothing of the heathen and infidel writers like Celsus, A. D. 150, and Porphyry, A. D. 304, who referred to and quoted multitudes of the very passages now found in the Scriptures which we have. Indeed, Lord Hailes, of Scotland, having searched the writings of the Christian Fathers to the end of the third century, actually found the *whole of the New Testament*, with the exception of less than a dozen verses, scattered through their writings, which are still extant; so that if at the time of the Council of Nice every copy of the New Testament had been annihilated, the book could have been reproduced from the writings of the early Christian Fathers, who quoted the book as we quote it, and who *believe it as we believe it*. And now infidels talk about the Council of Nice getting up a New Testament. You might as well talk about a town meeting getting up the Revised Statutes of the State of Massachusetts, because they say

they accept or receive them. *The Council of Nice did no such thing.* These books of the New Testament were received from the Apostle who wrote them, and were carefully preserved and publicly read in the churches of Christ long before the Council of Nice was held.

"Says Tertullian, A. D. 200: 'If you are willing to exercise your curiosity profitably in the business of your salvation, visit the Apostolic Churches, in which the very chairs of the Apostles still preside in their places; in which their very *authentic letters are recited,* sounding forth the voice and representing the countenance of every one of them. Is Achaia near you? You have Corinth. If you are not far from Macedonia, you have Phillippi and Thessalonica; if you can go to Asia, you have Ephesus; but if you are near to Italy, we have Rome.'

"These Apostolic Churches received the Gospel from the hands of the men who wrote them, and the Epistles were written and signed by men whom they well knew. Paul wrote: 'The salutation of me, Paul, by *mine own hand,* which is the *token in every Epistle,* so I write.'

"Now what did these men testify? They testified things which they *knew.* The Apostle John does not say: 'That which we have dreamed, imagined, or guessed at, that thing do we declare unto you;' but, 'That which was from the beginning, which we have heard, which we have seen with our eyes, which we have looked upon and our hands have handled, of the *Word of Life.*' (I John 1:1.) This was their testimony. They testify that they *saw* Christ in His life and in His death; that they saw Him after His resurrection, and felt His hands and feet, and saw the nail prints and the spear wounds; and they knew these things and testified to them. They preached Christ who had died and risen again. When a certain skeptic said he proposed to start a new religion, and asked a friend for some suggestions as to his best course, the friend replied: 'I would advise you to *get yourself crucified,* and *rise from the dead the third day.*' No infidel has succeeded in doing this.

"Then the Apostles quote from the Prophets, and the Prophets quote from the Psalms, and refer to the law which

was given on Mount Sinai. And so we go back from book to book, until we reach the book of Genesis, and that does not quote from anybody or anything. You have here reached the fountain-head.

"'But,' says one, 'I think the Bible may be a true history, but that is no proof of its inspiration. It does not require divine inspiration. It does not require divine inspiration to write a true story.' So you think it an easy matter to tell the truth, do you? I wish you could make other people think so. Suppose you go and read a file of newspapers published just before the election (or the first reports just after), and see if you do not think it requires divine inspiration to tell the truth, or even to find it out after it is told. Truth is mighty hard to get at, as you can see by perusing the daily papers on the eve of an election.

"There are certain things in the Bible which, to my mind, bear the impress of divinity. A skeptic will tell you what a race of 'old sinners' we read about in the Bible. Noah got drunk; David was guilty of adultery and murder; Solomon was an idolater and wrought folly; Peter denied his Lord, and Judas sold Him for thirty pieces of silver. All these people that the Bible talks to us so much about are a pretty sort of men! Very well, what kind of men do you expect to read about in the Bible? Noah got drunk! Is that strange? Did no one else ever get drunk? Peter cursed and swore. Are there not men about here who curse and swear? Judas, an Apostle, sold his Lord, who said he had chosen twelve, and one of them was a devil. Do you not find a Judas in the Church even nowadays? One in twelve was a thief and a traitor then, and we need not be surprised if we find about the same average now. But you seem to think that when you read about a man in the Bible he is sure to be free from all kinds of errors, frailties, faults and sins. You have formed this idea of men from reading in Sunday-school books about good children, who usually die young, or perusing excellent biographies, which, as you read them, cause you to exclaim: 'I wish I could be as good a man as he was, but I never shall.' If you knew

the whole story about the man, you might not feel so deeply on the subject.

"Do you suppose that if the Bible had been revised by a committee of eminent divines, and published by some great religious society, we should ever have heard of Noah's drunkenness, of Jacob's cheating, of Paul and Barnabas' quarrelling, or of Peter's lying, cursing or dissembling? Not at all. The good men, when they came to such an incident, would have said: 'There is no use in saying anything about that; it is all past and gone; it will not help anything, and it will only hurt *the cause.*' [Applause.] If a committee of such eminent divines had prepared the Bible, you would have got a biography of men whose characters were patterns of piety and propriety, instead of poor sinners as they were.

"Sometimes a man writes his own diary, and it *happens* that he leaves out all the mean tricks he ever did, because he expects peradventure it may be printed after he is dead, but puts in all the good acts he can think of; and you read the papers with astonishment, and think, 'What a wonderful good man he was!' But when the Almighty writes a man's life He tells the truth about him; and there are not many who would want their lives printed if the Almighty wrote them.

"Suppose a young man goes, say from here to Boston. Perhaps he is a rich man's son, who has more money than was good for him at home, and who comes to the city to see the sights. He sails around the 'Black Sea,' and slips into various ports that are not exactly safe, and the next morning finds him hauled up before his Honor in the police court. You get the morning paper, and you expect to find the full particulars of the case. You do, do you? You find a paragraph on this wise: 'A certain young man from the rural districts came to town yesterday, sailed around in different parts of the city, and fell into rather bad company. This morning he was brought up before his Honor, who admonished him to be more careful in the future, and he departed a sadder and wiser man.' This is the kind of a paragraph you will find in the papers when a rich man's son comes to the city, goes on a spree, and gets his

head smashed and his eye banged in a fight. You don't get many particulars. But if he is a poor vagabond, without a second shirt to his back, you can get his name, and perhaps the genealogy for generations, and all the particulars of his case. This is the way *men write history;* but when the Lord undertakes to tell *His history* or *story* of a sinful man, He does not select a poor, miserable beggar and show him up. He does not give even the name of the guilty woman who bathed the Saviour's feet with her tears; but He takes King David from the throne, and sets him down in sackcloth and ashes, and wrings from his heart the cry: 'Have mercy upon me, O God, according to thy loving kindness; according to thy tender mercies blot out all my transgressions.'

"And when he is pardoned, forgiven, cleansed and made whiter than snow, the pen of inspiration writes down the dark, damning record of his crimes, and the king on his throne has not power, or wealth, or influence enough to blot the page; and it goes into history for infidels to scoff at for three thousand years. Who wrote that?

"You find a man who will tell the truth about kings, warriors, princes and presidents to-day, and you may be quite sure that he has within him the Holy Ghost. And a book which tells the faults of *those who wrote it,* and which says to you that 'there is none righteous, no, not one,' bears in it the marks of a true book; for we all know that men have faults and failings, and sins, and among all the men described in the book, *every man* whose life is recorded has some defect, some blot, *save one,* and that is 'the man Christ Jesus.'

"Men love objections, and so they say there are difficulties, absurdities, errors and contradictions in the Bible. We have all heard such assertions. After speaking once in the city of Boston, an ex-minister came to me and told me that the Bible was not true, for there was that story which Moses told about the quails. Israel lusted after flesh, and the Lord sent them quails to eat, and they fell by the camp a day's journey on each side, or over a territory forty miles across, and they were two cubits deep on the ground, and the Israelites ate them

for about a month. I have in my possession an infidel paper, which was published in Boston, in which there is about a column of arguments and figures on this 'quail story;' giving an estimate of the number of bushels of quails that were piled up over the country, and showing that when they were divided among the six million Israelites, each Jew would have 2,888,643 bushels of quails, which they were to eat during the month, giving each poor Israelite 69,520 bushels of quails to each meal during the month; and therefore, the Bible was not true!! That is the sort of food our skeptical friends like to eat. That is the meat on which these Cæsars grow so wondrous great. I said to this gentleman, 'The Bible does not say any such thing!' He replied that it certainly did; but I answered that it did not say any such thing. He insisted that it did. 'Well,' said I, 'find it!' And when you ask an infidel to find anything in the Bible, you generally have him. He could not find the place; so I turned over to the eleventh chapter of Numbers, and there read that instead of the birds being packed like cord-wood, on the ground, three feet deep, the account says that the Lord brought the quails from the sea, and let them fall by the camp, as it were, 'two cubits high,' or about three feet high upon or above the face of the earth. That is, instead of flying over head and out of reach, they were brought in about three feet high, where anyone could take as many of them as they chose. And this skeptical friend had to get the birds packed solid, three feet deep, over a territory forty miles across. As if some one should say that a flock of geese flew as high as Bunker Hill Monument, and we should insist that they were packed solid from the ground up to two hundred and twenty-one feet high! This is a sample of the kind of arguments which infidels bring to prove that the Bible is not true! The revelations of prophecy are facts which exhibit the divine conscience. So long as Babylon is in heaps, so long as Nineveh lies empty, void, and waste; so long as Egypt is the basest of kingdoms; so long as Tyre is a place for the spreading of nets in the midst of the sea; so long as Israel is scattered among all nations; so long as Jerusalem is trodden under foot of Geh-

tiles; so long as the great empires of the world march on in their predicted course,—so long we have proof that one omniscient Mind dictated that Book, and 'prophecy came not in the olden time by the will of man.' The authorship of the Book is wonderful." End of H. L. Hastings' lecture.

"After the endurance of pagan persecution for three hundred years on the part of the Christians, Constantine, the Roman Emperor, embraced Christianity. Three hundred and eighteen bishops of all nations, and many priests, were gathered at this council, the Emperor Constantine presiding in person. By this council the books of the Bible were investigated carefully, and published to the world. 'Here,' says the skeptic, 'is opportunity for interpolation or Bible-making.' Let us see how much truth, if any, in this statement.

"There did exist then, undeniably, in the year 325 large numbers of Christian churches in the Roman Empire (*which filled the world*), sufficiently numerous to make it politic, in the opinion of infidels, for a candidate for the Empire to *profess* Christianity; sufficiently powerful to secure his success, notwithstanding the desperate struggle of the heathen party; and sufficiently religious, or if you like, superstitious, to make it politic for an emperor and his politicians to give up the senate, the court, the camp, the chase, and the theatre, and weary themselves with long prayers and long speeches of preachers about *Bible* religion. How came it so? for these men, preachers, prince and people were brought up to worship Jupiter and thirty thousand gods of Olympus, after the heathen fashion, and left the care of religion to heathen priests, who never troubled their heads about books or doctrines, after they had offered their sacrifices.

"In all the records of the world there is no instance of a general council of heathen priests to settle the religion of the

people. The Council of Nice and the Emperor Constantine and his counsellors making a Bible, is proof of a wonderful revolution in the world's religion,—a phenomenon far more surprising than if the Secretaries of State, and the Senate and the President should leave the Capitol and post off to Boston to attend the meetings of a Methodist Conference, assembled to make a hymn-book. How did they all get religion? How did they get it so suddenly? How did they get so much of it? The infidel gives no answer, except to tell us that the austerity, purity and zeal of the first Christians, their good discipline, their belief in the resurrection and the general judgment, and their persuasion that 'Christ and His Apostles wrought miracles, had made a great many converts.' [Gibbon.] This is just as if I inquired how a great fire originated, and you tell me that it burned fast because it was very hot. What I want to know is how it happened that these licentious Greeks and Romans and Asiatics became austere and pure; how these frivolous philosophers suddenly became so zealous about religion; what implanted the belief of the resurrection of the body and of the judgment to come, in the skeptical minds of the heathen scoffers; and how did the pagans of Italy, Egypt, Germany and Britain come to believe in the miracles of one who lived hundreds of years before, and thousands of miles away, or to care a straw whether the written accounts of them were true or false? According to the infidel's account, the Council of Nice and the Emperor Constantine's Bible-making is a most extraordinary business—a phenomenon without any natural cause (and they will admit of no supernatural), a greater *miracle* than any recorded in the Bible.

"If we inquire, however, of the parties attending that council, what the state of the case is, we shall learn that they believed—whether truly or erroneously, we are not inquiring, but

they believed—that a teacher sent from God had appeared in Palestine two hundred and ninety years before, and had taught this religion which they had embraced. (Fables of Infidelity, pp. 87–88.) But a difference of opinion had grown up as to the exact nature of this teacher in whom they believed, whether he were an angel from Heaven or God Himself. They assembled to discuss this solemn question, and through the whole of the discussions *both sides* appealed to the writings of the Apostles, as being then well known, and of unquestionable authority with everyone who had part in the discussion. These facts, being utterly indisputable, are acknowledged by all persons, Infidel or Christian, at all acquainted with history. Here, then, we have the books of the *New Testament* at the Council of Nice well known to the world; and the council, so far from giving any authority to them, bowing *to theirs,*—both Arian and Orthodox, with one consent, acknowledged the whole Christian world and received them as the writings of the Apostles of Christ.

"There were venerable men of fourscore and ten at that council; if these books had been *first* introduced in their life-time, they must have known it. There were men there whose parents had heard the Scriptures read in church from their childhood, and so could not be imposed upon with a new Bible. The New Testament could not be less than three generations old, else one or the other of the disputants would have exposed the novelty of its introduction from his own information. The Council of Nice then did not make the New Testament. It was a book well known, ancient, of undoubted authority among all Christians, *ages* before that council. 'The existence of New Testament Scriptures, then, ages before the Council of Nice, is a great fact.' (Fables of Infidelity, p. 70.)

"But as our work demands brevity, we pass over ninety-

nine hundredths of detail testimony and come to that of Polycarp, a pupil of the Apostle John, as found in Eusebius: 'If at any time I met with one who had conversed with the elders, I inquired after the sayings of the elders; what Andrew or Peter said; or what Phillip, Thomas, or James had said; what John or Matthew, or what any other of the disciples of the Lord were wont to say.' 'This writer gives a valuable testimony in regard to Gospels, Matthew and Mark, First Epistle of Peter and John. Also mentions the Acts and the Book of Revelation. Thus we have ascended to the Apostolic age. But we may reach still higher. We have in our possession the well-authenticated writings of four individuals and Fathers in the Primitive Church, who, because they were contemporary with the Apostles, are called *Apostolical Fathers.* Two of them, Clement and Hermas, are mentioned by name in the New Testament; the third, Polycarp, was an *immediate* disciple of St. John; the fourth, Ignatius, enjoyed the privilege of frequent intercourse with the Apostles. There is scarcely a book of the New Testament which one or another of these writers has not quoted or alluded to. Though what is extant of their work is very little, it contains more than two hundred and twenty quotations, or allusions to the writings of our sacred volume, in which they are uniformly treated with reverence, belonging to inspired books and entitled, 'The Sacred Scriptures;' 'The Oracles of the Lord.' (McIlvain's Evidences of Christianity, pp. 72–75.") Taken from Canright's Bible from Heaven.

Thus we have ascended the line of testimony into the presence of the Apostles. Our evidence has been collected from only a few out of the many witnesses that might have been cited. The argument is now, therefore, reduced to this: The Apostles and disciples of Christ are known to have left some writings. That these writings have been lost none can give a

reason for believing. It is not pretended that any other volume than that of the New Testament contains them. The books contained in this volume were considered to be the writings of the Apostles by the whole Christian Church, as far back as those who were their contemporaries and companions, being continually quoted and alluded to as such. It was impossible that such witnesses should be deceived. Contemporaries and companions must have known whether they quoted the genuine works of the Apostles, or forgeries pretending their names. Our evidence, therefore, is complete. What I have presented exceeds above measure the evidence for the authenticity of any other ancient book. Should the fifth part of it be required for the proof of the authenticity of any book of ancient Grecian or Roman origin, it could not abide the trial. But suffer a few more witnesses in regard to this wonderful book!!

First Written and First Printed Document.

"The decalogue containing the moral law (the Ten Commandments), is the very foundation and centre of the Holy Scriptures. And the moral law, engraved on stone by the finger of God, was the *first written* document on earth. The *Great Creator* set the first copy." (See "Facts for the Times.") Anderson says: "The first book ever printed on movable types was the Bible, in A. D. 1455." Also, Dr. Adam Glark says: "They contain the *most ancient* writings in the world; the *decalogue* of Ten Commandments, a part of the book of Exodus, being probably the first regular production in alphabetical characters *ever seen by man.*" (See Ib. p. 7, Clavis Biblica, p. 16.)

CHAPTER II.

Infidels and the Bible.

"INFIDELS have attacked Christianity; but anything may be attacked. They have slandered her doctrines, ridiculed her Word, reviled her precepts, hated her holiness, and influenced many to go and do likewise; but neither hatred, nor reviling, nor slander is the test of truth. Have infidels ever resorted to the only fair and honest mode of meeting face to face the whole array of testimony which Christians advance by endeavoring coolly to prove, as a matter of historical evidence, that the authenticity of the New Testament and the credibility of its history are not sustained; that the miracles of Jesus have not been supported with adequate testimony; that the prophecies of the Scriptures have met their attestation in no accurate histories; that Christianity was propagated by human force alone, and its fruits are those of a corrupt and deceitful tree? I answer, no. There are such efforts in the books of infidelity. I read of speculations opposed to our facts; insinuations in answer to our testimonies; sneers in reply to our solemn reasonings; assertions where we demand arguments; levity and presumption where an advocate of truth would have been serious and humble. But I know of no such thing as a book so infidel in any sense corresponding in the nature, or grounds, or spirit, of its reasoning, with such arguments for Christianity as those of Paley, or Lardner, or Gregory, or Wilson, and a thousand others, to which not a man *ever dared to attempt an answer.* Infidelity, like an insect on the pillar of some stupendous temple, that can see no farther

than the microscopic irregularities of the polished marble beneath its feet, may busy itself in hunting for little specks in the surface of the stately edifice of Christianity; but it has no such eye, and takes no such elevated stand as would enable it to survey the whole plan, and judge of its pretentions by the mutual adaptation of its parts, the harmony and grandeur of its proportions. Infidelity is all speculation. Reduce it to a residuum of inductive reasoning, and you bring it to nothingness. Strip it of its several envelopes of ingenious hypothesis and bold assertion and scoffing declamation, and you find nothing left but a man of straw,—an ugly shape to keep the hungry from the bread of life, which you need only to approach to discover that it is made of rags and stuffed with nothingness." McIlvaine's Evidences, pp. 481, 482, 485.

"The most formidable and deceptive form of infidelity comes in the shape of 'philosophy.' Not that *true* philosophy or science opposes the Bible, but that men hide their infidelity behind the sciences; and men that know but little of science or the Bible, talk as learnedly of the absurdities and incongruities of the Bible as though they had committed it to memory, and speak as fluently of science as though they ordained the laws that keep the planets in their courses. Some think they have only to reject the Bible aad call it a humbug and they are philosophers at once; that skepticism is an evidence of a great mind; that there is no surer proof of intellectual superiority than to treat all religion as a mere fable, fit only for the amusement of women and children. Hence come the groundless assertions concerning the Bible, which are so confidently repeated. These things are regarded as an evidence of having arisen above the common herd of mankind and outgrown their superstition. Would-be philosophers feel a kind of pride in plunging into the whirlpool of infidelity, while many great

minds tremble even to approach its brink. Many flatter themselves that they are fiends, who some day will be astonished to learn that they are only fools." Canright in Bible from Heaven, p. 284.

"Every little fledgeling which has scarcely left its nest, or the care of its mother, hastens through the spelling-book and primary reader, and then sets up for an oracle; discourses learnedly of spirit and matter, of the physical and moral worlds, the eternal and unbending laws of nature, the mysteries of time and space, the wonderful revelations of animal and spiritual magnetism, of the infinite and invisable; and deals with the profoundest questions of divine truth with more ease and familiarity, and not half the reverence, of a Jesus or a Paul. He speaks as though he had sounded all the depths of knowledge, with an air of unquestionable authority. He talks of things known and unknown—*mostly of the latter.* He uses borrowed formulas of speech, 'words of prodigious length and thundering sound.' He rises up into what he calls the spiritual view of all subjects. He expands and becomes more and more transparent, till the inflation is so great as to end in the usual results of the law of expansions, or he passes off out of sight into infinite fogdum, like the comet that became entangled among the moons of Jupiter, never regains his orbit again, which, perhaps, is little cause for regret. The comet is scarcely needed to light up our evening skies, and its presence will not be missed while the fixed stars continue to shine on in their everlasting beauty. Now we are ready to say that we have no reverence whatever for this kind of philosophers, nor for their philosophy. It is a broad burlesque upon the name. It does not come down into the earnest and solemn realities of life, and speak of our individual and social duties, relations and responsibilities. It spends itself in asking questions, which, if

answered, would lead to no valuable results. It apes the profound and mysterious. It occupies all its time in mere speculation, in weaving gossamer webs, and building rainbows on the overpassing clouds. It talks like a parrot, but never works, never makes itself useful. In a word, this folly, absurdly called philosophy, is a mere baby, not to say idiotic, babbling sheer nonsense mostly, intelligible neither to itself nor those who hear." Christianity vs. Infidels, pp. 6–8.

To the glory and triumph of the cause of Christ and His Gospel of Truth, we condescend to bring forward one or two or perhaps more of the renowned writers against the Bible and Christianity. It will not be necessary to give a lengthy *review* of any of these gentlemen, for they all arise to about the same altitude and use about the same logic, therefore a thorough refutation of one of these croakers which carries the trumpet and banner of the poorly-informed masses that follow in their wake will be quite sufficient. We will endeavor to give the reader the benefit of the judgment of qualified historians and scientists upon their standing before the enlightened world.

"Among the modern historians of Continental Europe Voltaire is the most widely known. His writings show great literary skill, with the power of quick, but not very deep penetration. His pen is often guided by a humane and enlightened philosophy, but it is as often misled by strong partialities. He exhibits, to an *undue* extent, his systematic hostility against established opinions and forms of society, in which he does not scruple to employ the *arts of misrepresentation.*" Goodrich's History of All Nations.

Perhaps it is but justice, and therefore due to the apostle of European infidelity and his American admirers, to give a short biographical and yet synoptical description of the accompanying character. The record which we here give sketches

of will be found in Encyclopædia Americana, article Voltaire. "His influence was felt throughout Europe; and never did a man, by the force of his writings, obtain such power over his nation.


Voltaire.

Voltaire was born at Chatnay, near Paris, February 20, 1694. His father wished to see him a lawyer and advocate, but his love of literature and general study did not allow him long to devote himself to the law. He wrote poetry continually, and cultivated his talents in the company of men of much accomplishment and wit, but of little principle; such as Chaulieu, the Marquis de la Fare, Marshal Villars, the Grand Prior of Vendome, the Prince of Conti, and others. He caught the tone of polished society which distinguishes his writings and which greatly contributed to his influence. His father was displeased with his mode of life and entreated the Marquis of Chateauneuf, French Minister to Holland, to take the young Voltaire with him as a page. He consented, but Voltaire fell in love with the daughter of Madame Noyer, a refugee in Holland, and was therefore sent back to his family. In 1716 he was imprisoned in the Bastile on the charge of having written a satire against the Government. He remained in confinement a year and a half, and, in this situation, planned a poem upon the League, the result of which was the *Henriade*. He likewise improved the tragedy 'Ædipus,' which was brought upon the stage in 1718, and was performed forty-five times in

one year. Meanwhile, the poet had been released from prison in consequence of the real author of the satire having disclosed himself, but had been banished from Paris. In 1726 Voltaire was again imprisoned, at the age of thirty-two, in the Bastile. He had offended the Chevalier de Rohan, a proud young nobleman, who, in consequence, caused him to be beaten by his servant. Voltaire now learned to fence and challenged the Chevalier, whose relations thereupon procured an order for his imprisonment. At the end of six months he was released at the intercession of the Marchioness de Prie, the favorite of the Regent, who admired his poetical talents, but he was compelled to leave the kingdom. In 1728 he was permitted to return to France, where he put his effects into a lottery. By this, as well as by other fortunate speculations (he traded under the name of Du Molin and sent ships to Africa), he obtained great wealth, so that, after he came into the possession of the estates of his father, his income amounted to nearly 130,000 livres, which he employed in a praiseworthy manner; he particularly aided youthful literary talent. In 1730 he brought the tragedy of 'Brutus' on the stage. He afterwards attacked the pretensions of the Church with such vehemence in his *Lettres Philosophiques* that the Parliament of Paris condemned the book to be burnt, and an order was issued for the arrest of the author. He thereupon passed some years in concealment. He soon returned to his poetry and wrote, in 1736, his *Alzire*, and, in 1741, his *Mahommed*.... To the clergy he was particularly hostile, on account of their intolerance and persecuting spirit. But he often injured the cause of religion itself while he attacked its servants. His motives, moreover, were not always of the highest kind." [Inasmuch as ye have done it unto one of the least of these my servants, ye have done it unto me.—Christ.] "At the advanced age, February, 1778,

he returned once more to Paris. Here he found admirers and bitter enemies. He was sensible of the dislike entertained towards him, and therefore when stopped by the officers of the customs with the inquiry if he had any contraband goods with him, he replied: 'No, no; there is nothing contraband here but myself.' The inquiry of the King, on his arrival, as to the decree of Parliament being still in force against him made him uneasy, but nothing further was done to molest him. The actors waited on him in a body. We have come,' said they, 'to beseech you to inspire us with your odes.' 'I *live* only for you and through you,' was his answer; 'I have come to Paris to find my glory and my grave,'—a proof that he considered his dramas as his chief productions [of life], and, in truth, dramatic works were his last labors. The circumstances of his death have been related differently, but it is certain that Voltaire died without receiving the sacrament in the eighty-fifth year of his age, May 30, 1778. The Archbishop of Paris is said to have denied the corpse Christian burial, and it was therefore interred secretly at Scellaires, a Barnardian abbey, between Nogent Troyes. By a decree of the National Assembly (1791) his remains were placed in the Pantheon. in Paris.

"The exterior of Voltaire was quite characteristic. In his countenance, as has been said, there was a mixture of the eagle and the monkey; and, in character, he exhibited the boldness of the one with something of the malice of the other. Dupont has lately published an edition of Voltaire's works, in seventy volumes. A tolerably complete but perhaps not entirely impartial review of the numerous literary contests of Voltaire is given in the *Tableau Philosophique de L' Esprit de M. d Voltaire* (Geneva, 1771.)"

Thomas Paine.

We will now notice another character who was born about forty-three years this side of the renowned Voltaire's birth, and contemporary with him about thirty-four years, yet did not arise to that political eminence of his predecessor. Thomas Paine is best known to the world as the author of a book which everybody has heard of, but comparatively few have read. Few Christians have ever examined it, and to those only who are familiar with the Scriptures and on their guard, may the work be read with profit. One of Paine's biographical writers (Hugh O. Pentecost), who seems to be announcing Paine's publication as his prime object, says:—" 'The Age of Reason' is almost universally believed to be a book mainly directed against the Bible and the Christian religion, but it was written *not* for the purpose, primarily, of destroying Christianity, but to stem the tide of atheism in France that swept over it in the unhappy days of the Revolution."

We wish to do no man injustice by even quoting encyclopædias, but as we have Mr. Paine's work before us, we will give a few of his words as we find them, and let the readers judge for themselves; yet, it may be a question in the minds of some honest investigators, which is doing the greatest amount of harm: the openly and avowed infidelity or *avowed* Christianity, *falsely so-called,* which teaches anything but the unadulterated truth? But to return:

"I do not believe in the creed professed by the Jewish Church, by the Roman Church, by the Greek Church, by the Turkish Church, by the Protestant Church, nor by any church that I know of. My own mind is my own church." (Page 5, Age of Reason.) The worship of self is doubtless the great cause of a vast amount of infidelity. "The Resurrection and Ascension, supposing them to have taken place, admitted of

public and ocular demonstration, like the ascension of a balloon, or the sun at noonday, to all Jerusalem at least. A thing which everybody is required to believe; requires that the evidence of it should be equal to all, and universal. Instead of this, a small number of persons, not more than eight or nine, are introduced as proxies for the whole world, to say that they saw it, and all the rest of the world are called upon to believe it! But it appears that Thomas did not believe the Resurrection; and, as they say, would not believe without having ocular and manual demonstration himself. *So neither will I*, and the reason is equally as good for me, and for every other person, as for Thomas." Ib, p. 6. Just so: just as good for you as for Thomas, and no better. Christ said, "In the mouth of *two* or *three* witnesses every word shall be established;" and He is no respecter of persons. But Jesus said, "*Blessed* are they that *have not* seen, and yet *have believed.*" (John 20: 29.) Is not this a reproof for undue incredibility?

Rev. L. A. Lambert and R. G. Ingersoll, in "Notes on Ingersoll," by Rev. L. A. Lambert.

As the mass of the prime objections raised against the Bible and Christianity are covered in the comments of Rev. L. A. Lambert's "Notes on Ingersoll," we will let a few sketches from his Notes suffice.

Ingersoll—"What we know of the infinite is almost infinitely limited, but little as we know, all have a right to give their honest thought."

Comment—"Has any man the right, common sense being the judge, to talk about that of which his knowledge is almost infinitely limited? All may have an *equal* right to give their honest thought, but none have the right to give their honest thought on all subjects and under all circumstances. Common sense and decency forbid it. The honesty of thought does not give

weight, or importance, or truth to it. If so, lunatics would be the best of reasoners, for none are more honest in their thoughts than they. Thought must be judged with reference to the truth, and not with reference to the honesty of him who thinks it. This plea of honesty in thinking is a justification of every error and crime, for we must, in the very nature of the case, take the thinker's word for the honesty of his thought. Guiteau, if we can believe him, expressed his honest thought by means of an English bull-dog revolver, and if your theory be true, he had a right to do it. The right to give an honest thought implies the right to realize that thought in action and habit. If it means less than this, it means the right to gabble like an idiot. I assume that it is not this latter that you claim. Then, in claiming the right to give your honest thought, you claim to realize that thought in act and practice, and cause it, as far as you can, to permeate, and obtain in human society. If your claim for liberty of thought means less than this, it is the veriest delusion. I take it, then, that, in claiming the right to give your honest thought, you claim the right to promulgate that thought, and to put it in practice in the affairs of life. Now, in view of this claim of yours, I ask, by what right do you interfere with the slave-holder's honest thought, or the Mormon's honest thought? Your plea for the right of expressing honest thought is a miserable pretense, or else by it you mean that those only who *agree with you* have the right of expressing it in word or action. The doctrines of our loquacious liberals, when analyzed, will be found to mean precisely this and nothing more." P. 35, 36, Notes on Ingersoll.

Ingersoll—"Logic is not satisfied with assertion."

Comment—"Then it is not satisfied with your assertions in reference to it. But you are evidently ignorant of what logic means. Logic as a science deals with principles, not as-

sertions; and logic as an art deals with assertions only. Assertions are the subject matter on which it acts. It simply deduces conclusions from assertions or propositions called premises, and cares not whether these premises are true or false. Hence, the very reverse of what you say is true. Logic is satisfied with assertions, and knows and deals with nothing else. Your blunder arose from your confounding *reason* with *logic.*"

Ingersoll—"In the world of science a fact is a legal tender."

Comment—"Then, before you can assert a legal tender you must demonstrate a fact. A fact must be established as such before it is legal tender. Now, the question between you and the Christian is this: What are the facts? The whole controversy rests on this question. What you offer as facts the Christian may reject as fallacies and sophistries, and what he offers as facts you may reject. It follows, therefore, that until both parties agree as to what are the facts they cannot agree as to what is legal tender. What you intended, then, as a wise saying has no practical sense in it. But for those who like that sort of thing it is about the sort of thing they will like."

Ingersoll—"A fact is a legal tender."

Comment—"A counterfeit is a fact; is it legal tender? Oh, no! Well, then, a fact is not a legal tender until it is known to be a fact. What is a legal tender? It is a promise to pay, which may not be worth ten cents on a dollar, but which the law compels you to accept when offered. Is this your idea of what facts are? And do you intend the facts offered by you to be received in that light? If so, perhaps you are right."

Ingersoll—"Assertions and miracles are base and spurious coins."

Comment—"If this be true, then the assertion you have just made is base and spurious coin. You say assertions are base and spurious. Is it because they are assertions or because they are false? If all assertions are base and spurious we can not believe anything whatever that is asserted, simply because it is asserted. I assert that two and two make four. This is an assertion. Is it false? It must be if what you say is true. From this it appears that you again failed to say what you meant, for you will certainly admit that *some* assertions are true—your own, for instance. Perhaps you meant to say that *false* assertions are base and spurious. If so, this is on a par with your legal-tender sophism and involves the same amount of meaningless verbiage. The truth or fallacy of an assertion must be established before you can assert it to be base and spurious. But the truth or fallacy of an assertion is the question now in debate. Let me illustrate: I make the assertion that the Christian religion is of Divine origin. You will observe that the truth or fallacy of this assertion is the point in debate, and to assert either one or the other without proof is to beg the question. This you do when you assert that assertions are base and spurious. But perhaps I have misunderstood you all this time. You 'probably think' that all assertions favoring Christianity are base and spurious, while those against it have the true ring. If you mean this you should have had the 'courage of the soul' to say it, and not hide your insinuation under a meaningless, common-place phrase. I notice you are fond of making curt little maxims, which on examination mean nothing, unless when they cover a fallacy."

Ingersoll—"Miracles are base and spurious coins."

Comment—"That depends. And here I must make the same distinction I made in regard to assertions. If a miracle is a fact, it is not base and spurious." [The devils have power

to deceive some that dwell on the earth by the means of his miracles that he had power to perform. See Rev. 13: 14, 16: 14.] "Now the fallacy of a miracle is the point in debate. Until that point is settled, not by assertions, but by valid arguments, you cannot say that it is spurious, for when you make that assertion you simply beg the question. ....A sign of conscious weakness." Pages 54–57, Notes on Ingersoll.

We will ask the reader to follow these two contestants but a *few pages*, as the issue before us is one of which many have been misled in their conclusions as to the God of the Bible. This review covers in substance the *viperous hissings* of all who have heretofore brought forth what they have claimed the injustice of the God of the Bible.

We will quote a sentence or two from Paine's "Age of Reason" as it is of the same nature and refers to the points that Ingersoll does:

Paine—"When we read in the books ascribed to Moses, Joshua, etc., that the Israelites .... put all those nations to the sword; that they spared neither age nor infancy; that they utterly destroyed men, women and children; that they left not a soul to breathe. .... Are we sure that these things are facts? Are we sure that the Creator of man commissioned these things to be done? Are we sure that the books that tell us so were written by His authority?.... The Bible tells us that these assassinations were done by the express command of God. To believe, therefore, the Bible to be true, we must *unbelieve* all our belief in the moral justice of God; for wherein could crying or smiling infants offend." Age of Reason, p. 62.

Ingersoll—"He [God] ordered the murder of *millions.*"

Comment—"He never *authorized* or *ordered* the *murder* of *anyone*, from Abel to Garfield. God is the author and *giver of life*, and those He places on this earth He can remove at His

will. No man has a right to live one instant longer in this world than his Creator wills him to remain, be he yet unborn or innocent or guilty. As creatures of God we are absolutely His, and can have no rights whatever against Him.....Now, He who has the absolute right to transpose man from one state of being to another has equally the right to select the method of his removal, whether by old age, disease, the deluge, the sword, or by what we call accidents. By whatever method man is withdrawn from this life's fitful fever, his death is in pursuance of the original sentence passed on the race by an infinitely just Judge. This sentence awaits you, and your philosophy will not obtain you a stay of proceedings or an exemption.

"But, to return. He who has the absolute right to take or give life cannot be guilty of *murder* in taking it, for murder is an unjust killing, and there is no unjust killing in the taking of life by Him who has the absolute right to take it." [God is the *source of all life*, animate or inanimate, and there is no other source of life from man in His image, to the beast or a spear of grass.] "There is no escape from this reasoning, except by denying the absolute right, and you cannot deny this but by denying God's existence, for on the hypothesis that He exists He is Creator, and, being Creator, the absolute right of dominion over His creatures necessarily follows.

"Then, in the last analysis, to deny this right is to deny God's existence. But you cannot logically deny His existence since you say in your lecture on "Skulls" that you do not know whether He exists or not.

"I have dwelt at some length on the absolute right of dominion of the Creator over His creatures, because you harp on what you call His murders through your whole article. It was *unjust killing* that God forbade, and the destruction of that

guilty people was just, because ordered by Him who had the absolute right to order it, whether guilty or not. As to the Canaanites, they were guilty of death..... The unparalleled wickedness and filthy abominations of the seven nations of Palestine, commonly called Canaanites, were such as to make their national expulsion or extermination a just punishment and a useful lesson to other nations. The nature of their crimes may be found in the eighteenth chapter of Leviticus. Read the chapter and you will understand why the Lord held these *beastly* people in abhorrence. The Mormons and the Oneida Communists are as pure as the driven snow in comparison with them. To give the reader an idea of their incredible debasement, I quote some verses from the end of the chapter wherein God warns the Hebrews not to imitate their example: 'Defile not yourselves with any of these things with which all the nations have been defiled, which I will cast out before you. And with which the land is defiled; the abominations of which I will visit: that it may vomit out its inhabitants. Keep ye my ordinances and judgments and do not any of these abominations. ...... For all these detestable things the inhabitants of the land (Canaanites, Amorites,) have done that were before you, and have defiled it. Beware of them, lest in like manner it vomit you also out, if you do like things, as it vomited out the nation that was before you. Every soul that shall commit any of these abominations shall perish from the midst of his people.'

"The abominations are described in the first part of the eighteenth chapter. Read it carefully that you may know the abominable wretches you sympathize with.

"The author of the Book of Wisdom describes some of the sins of those people and justifies their punishment in words that I cannot do better than to quote:

"'Thou chastisest them that err by little and little; and admonishest them, and speakest to them, concerning the things wherein they offend; that leaving their wickedness they may believe in thee. For those ancient inhabitants of the Holy Land, whom thou didst abhor because they did works hateful to thee by their wicked sorceries and wicked sacrifices, and those merciless murderers of their own children, and eaters of man's bowels, and devourers of blood from the midst of thy consecration; and those parents sacrificing with their own hands helpless souls, it was thy will to destroy by the hands of our parents. .... Yet, even those, thou sparedest as men, and did send wasps as forerunners of thy host, to destroy them little by little. Not that thou wast not able to bring the wicked under the just by war, or by cruel beasts, or with one rough word to destroy them at once; but executing thy judgment by degrees thou gavest them place of repentance, not being ignorant that they were a wicked generation, and their malice natural, and their thought could never be changed.....Neither didst thou for fear of anyone give pardon to their sins. For who shall say to thee: What hast thou done? or, who shall withstand thy judgments? or, who shall come before thee to be a revenger of wicked men? or, who shall accuse thee if the nations perish which thou hast made?....For so much, then, as thou art just, thou orderest all things justly, thinking it not agreeable to thy power to condemn him who deservest not to be punished. For thou showest thyself when men will not believe thee to be absolute in power, and thou convincest the boldness of them that know thee not. But thou, being master of power, judgest with tranquility, and with great favor disposeth of us, for thy power is at hand when thou wilt. Thou hast made thy children to be of good hope, *because in judging thou givest place for repentance for sins*.....But they that were

not amended by mockeries and reprehensions experienced the worthy judgment of God.' (Wisdom, chapter 12.)

"Here we find these people whom you beslaver with your gushing sympathy were sorcerers, murderers of their own children, offering them with their own hands in sacrifice to idols and man-eaters. On the other hand we learn the merciful way in which Jehovah warned them and gave them time and place for repentance. When they rejected His mercy He punished them with justice, and, for doing this, you accuse Him of *murder!* Those who, knowing the crimes of this people, condemn Mormonism and Oneida Communism, and yet you volunteer to advocate those bestial Sodomites of Canaan whose unnatural disgrace fell on the race to which they belonged and contaminated the land which God had given them to dwell in."

"A fellow feeling makes us wondrous kind."

Ingersoll—"He (God) gave captive maidens to gratify the lust of captors."

Comment—"I flatly deny the truth of the statement given above and appeal to the only record that can give us any record on the subject, namely, the Old Testament. The Hebrew military laws *did not* abandon captive women to the insolence or brutality of captives. On the contrary, they made special provisions forbidding the first familiarities of the soldier with his captives. If you study the twenty-first chapter of Deuteronomy, verses 10-14, you will learn that the soldier was obliged to make the captive his wife, or respect her person and honor. Instead of tolerating that licentiousness which the customs and laws of other nations authorized, the laws of the Hebrews kept the soldier in restraint.

"The pagan nations of that time allowed every familiarity with captives, and after they were sold as slaves, or given to the lust of slaves. This was strictly and specifically forbidden

by the Hebrew law. And, yet, in the face of all this, you have the effrontery to charge the Almighty with permitting the Jews to do that which he forbade, and which they, alone, of all ancient nations, prohibited by strict and specific laws. What will honest men of common sense think of a philosophy that has to be propped and bolstered up by such shameless misrepresentations of history?"

Ingersoll — "He (God) sent abroad lying spirits to deceive his own prophets."

Comment — "I will give one hundred dollars to the poor of this village if you or any of your disciples will make good your statement. I am familiar with the texts in Kings and Ezechiel which you probably *imagine* will bear you out, but if you carefully compare those texts with your statement you will find that your zeal has ran away with your discretion, and that your hatred of your Maker is more intense than your love for truth.

"God abhors lying spirits, false prophets, false philosophers and deceivers of all kinds, ancient and modern, and yet he permits them to exist because he cannot make them impossible without destroying free will or human liberty. There were laws enacted condemning the false prophets and other popular seducers, but these laws were not enforced because the false prophets, etc., flattered the passions of the people, telling them pleasant things. They were *popular lecturers* in their day, and they did not die without issue." [Or childless.] Rev. L. A. Lambert's Notes on Ingersoll, pages 35–75. By permission of copyrighters.

CHAPTER III.

Geology of the Bible.

WE now reach the questions: 1. Does Geology overthrow the Mosaic record of creation? 2. Does the Bible stand on geological science? 3. Or does Science stand on the Bible?

In order to illustrate these interrogations the writer knows of no better plan than to give in substance, a dialogue that he took part in while in a social conversation with a friend in Toledo, Ohio. Mr. S——, we will denominate the skeptical and would-be geologist and scientist, says: "You Christians do not read the Bible aright; of course you read it as it is, and understand it as you have been taught."

True, Mr. S——, 'tis education that forms the common mind. Just as the twig is bent the tree's inclined. But, Mr. S——, what is wrong about our understanding the Mosaic record?

"You Christians understand the earth and all that was in existence in Adam's time, to have been created in six literal twenty-four-hour days, whereas, geology demonstrates this false; and further proves that these days were immense long periods; there are petrified trees found in California, whose grains count more years than the Mosaic record allows; with your version of the matter."

Now, Mr. S——, I suppose that you believed in some kind of an intelligence that created man in the entirety?

"Yes."

Did he create him a full-sized man? Or was he an infant and finally grew to the stature of a man?

"I do not believe in the Darwin theory; therefore, I believe that when man came into existence he was as complete in all respects as at the present time."

Mr. S——, you would not suppose that it would be any more wonderful, or any more of a miracle for the Creator to make a full sized tree, with its numerous grains, diversified leaves and fruit, than it was to make man?

"N-o. For it was on the third period that God said: 'Let the earth bring forth its grass, the herb yielding seed, and the *fruit tree* yielding fruit after his kind, whose seed is in itself upon the earth; and it was so.' Gen. 1: 11, 13. And, further, if these days were long periods of thousands of our years, then there was ample time for all these herbs and trees to mature and yield fruit after their kind."

Then, Mr. S——, I suppose you would not admit of these periods being less than a thousand years each?

"No, sir, not less than fifteen thousand each."

Then, Mr. S——, let us take the Bible and read the affirmation at the close of each of these periods of creative work, substituting your version for the literal.

"Very well."

For brevity in reaching the points we will only read the last verse, or a portion of it, commencing at Gen. 1: 5. "And God called the light day, and the darkness He called night. And the evening and the morning were the *first fifteen thousand years.*"

Eighth verse. "And God called the firmament Heaven. And the evening and the morning were the *second fifteen thousand years.*"

Thirteenth verse. "And the evening and the morning were the *third fifteen thousand years.*"

But let us pass on to the *sixth* and *seventh* periods. Verse

31. "And God saw everything that he had made, and, behold, it was very good. And the evening and the morning were the *sixth fifteen thousand years*."=90,000.

Thus the heavens and the earth were finished and *all the host of them*. And on the seventh "*fifteen thousand years*" God ended His work which He had made; and He *rested on the seventh fifteen thousand years* from all His work which He had made. And God blessed the "*seventh fifteen thousand years*" and sanctified them because that *in them He had rested* from all His work which God created and made.

These are the generations (account or pedigree) of the heavens and of the earth when they were created, in the day (or time) that the Lord God made the earth and the heavens," Genesis 2: 1-4 inclusive.

Now, in order to ascertain definitely what governed the length of these days, we have only to refer to the closing declamation of each period or day: "*the evening* and *the morning*."

What did God call the *dark* and the *light?* Genesis 1; 5. Ans. Day and night.

What did God give to govern and rule the day and the night? "And God said, 'Let there be lights in the firmament of the heaven to *divide* the day from the night; and let them be for signs, and for seasons, and for days and years.' And God made two great lights; the greater light to rule the day, and the lesser light to rule the night; He made the stars also." Genesis 1: 14-16.

Now, it must be manifest to every unbiased mind what kind of a *day* or *period* the Lord is talking about. We go to Exodus, 20: 11, and find the same time brought to view. "For in six days the Lord made heaven and earth, the sea and all that in them is, and rested the seventh day: wherefore the Lord

blessed the Sabbath day and hallowed it." ("To hallow" to set apart for a holy purpose—*Webster.*)

But what does God command *man* to do in regard to these days on which the Creator labored? Ninth verse: "Six days shalt thou labor and do all thy work." A long period of toil before rest—90,000 years!

And how about rest, given to man, which was to commemorate the Creator's work? Let us read the tenth verse: "But the seventh day is the Sabbath of the Lord thy God; in it thou shalt not do any work, thou, nor thy son, nor thy daughter, nor thy man servant, nor thy maid servant, nor thy cattle, nor the stranger that is within thy gates." So we see the *rest* that was assigned to man, if the days be understood as geologists claim, would reach *far beyond* the age of man. A very long rest!!

Perhaps there are some people nowadays who were born tired and would be fond of such a rest.

Thus we may see the object of Satan to overthrow the Mosaic record of creation and the Sabbath—the *memorial* of the Creator's works. But the effort is a failure. God says, "I change not."

Geology and Astronomy. Its Popularity vs. Bible.

We think we have said sufficient in favor of the infallibility of the Bible to be free in using it as a reference for evidence on any subject on which the Word may treat. But should the skeptic yet require more, we know of no better way to test the infallibility of the Word than for him to take the prophecy of Daniel, chapters two, seven, eight and nine, concerning the four Universal kingdoms, with many details concerning them; also the prophecy concerning the first and second advent of Jesus Christ. Compare these with history, and if you have a desire for *truth* you can get it in abundance.

We now propose to give some of the popular views of Geology and Astronomy as quite generally believed and taught by the supposed scientific and Christian world, after which we shall let the *Word* speak.

The Bible was not given to teach the science of geology nor astronomy, neither does it make such claims; yet when it speaks "we do well to take heed." "Knowing this first that no prophecy of the Scripture is of any private interpretation. For the prophecy came not in old time by the will of man, but holy men of God spoke as they were moved by the Holy Ghost." 2 Peter 1: 20,21.

Creation of the World, etc., According to Popular Scientists.

"Creation of the world, 4,000 before Christ, Julius Africanus says 5,508; Samaritan Pentateuch, 4,700; Septuagint, 5,872; Josephus, 4,658; Talmudists, 5,344; and others give different times, but the Chinese tradition and *history* claim an antiquity of 100,000 years before Christ. From geological formations and from workings of rivers like the Niagara and the Danube through the Iron Gate in the Alps, it can be estimated at an age of *millions* of years. The creation itself, or the accumulation of enormous quantities of matter in the large planets, must have required millions of years. No body, however small, has been instantly created. [Forbidding the power of the Almighty.] Creation is the work which consists of the three physical elements — force, motion and time — by which bodies grow like a tree, or by gradual accumulation of matter. These three physical elements constitute the Trinity which governs the material universe. All creation, or action of whatever kind, whether mechanical, chemical or derived from light, heat, electricity or magnetism — all that has been and is to be done or undone — is accomplished by this Triune function. It is

Omnipotent, ubiquitous and eternal."—Nystrom's Mechanics, page 498.

This is the result and conclusion that thousands are led to who follow the Newtonian system of gravitation, geology or astronomy. You may say that the above is absolute infidelity; so says any true lover of God's Holy Word. But let us look at the words of a *"Connecticut Pastor,"* Ecce Cœlum or Parish Astronomy, by Burr. This popular and extremely eloquent work, published by the American Tract Society, 150 Nassau Street, New York, some seven or eight years since the present writing, 1893, had reached its twentieth edition. On page 183 he says: "All of Kepler's and Newton's laws are as operative to-day as they ever have been since their discovery. The planets shoot round the sun and are circled by their own moons, on substantially the same elliptical orbits, in the same times, and with the same principles of alternate retardation and acceleration as of old." Again, on page 185: *"Repeatedly has the earth been drowned* and torn in pieces. It has been piled with snow and ice from pole to pole. It has been all ablaze and fused. And is it not on the idea of such a conflagration that we can best account for the new stars that have sometimes flashed suddenly on the sight with all the splendor of Venus at its brightest, and, after a few months of changing color and gradual decay, finally disappeared."

But how about the earth's having been repeatedly drowned? How about God's covenant with Noah? Gen. 9: 11-15: "And I will remember my covenant with you: and I will remember my covenant, which is between Me and you and every living creature of all flesh; and the waters shall no more become a flood to destroy all flesh."

And we will notice another display of crazed sublimity, page 189: "Geometry declares that no element of decay,

within, endangers the stability of the system of the world. The year which circumscribes our seasons is only three hundred and sixty-five days; but the earth has another year to which this is a mere point — its pole goes nodding through space in a circle which it takes twenty-five thousand years to traverse. What think you of a planet whose *winter* is more than forty of our years, of a comet whose year is more than thirty of our centuries, of a sun whose year is more than eighteen thousand of our milleniums (or thousands)? All the planetary orbits pass through cycles of changes, varying in length from a few centuries to nine thousand, to seventy thousand, to even many million years; but the greatest of these planetary cycles are as nothing compared with those enormous periods which bound the perturbations and express the secular equations of the sun and fixed stars — periods including more years than *imagination* has ever succeeded in realizing to itself. What amazing longevities! What portentous numerals! They are hieroglyphics of the everlasting. They lift us among the dizziest peaks of the sublime." Yes, and far beyond. Satan has lifted man in his own estimation of wisdom to a far greater height than he did the Saviour when he set him on the pinnacle of the temple, or when he "took him up into an exceedingly high mountain and showed him all the kingdoms of the world in a moment of time." When Satan lifts man he is ready to exclaim: "All this have I gotten by the *might of my power.*" But when God causes man to behold the glories of the Eternal he exclaims in humility: "I beheld things unlawful for man to utter;" or, like Daniel: "For my comeliness was turned in me into corruption and I retained no strength." God's plan is: "Pride goeth before destruction and an haughty spirit before a fall;" "before honor is humility." We will next notice the contrast between the popular view, the "Newtonian and Kep-

ler" system and the Mosaical record, of creation and the longevity of man.

The Mosaical Record of Creation Contrasted with the Popular Views.

Let it ever be remembered that the Mosaical record of creation is neither a type, shadow nor symbol of any act ; neither is any part of the record of creation so claimed by theologians, except in some instances in the case of the seventh day, on examination of which we shall find that it was instituted as a *memorial* to man of the act performed by the Creator.

Let it also be borne in mind that "the prophecy came not in olden time by the will of man, but holy men of God spake as they were moved by the Holy Ghost." Second Peter 1 : 21.

We feel that we have said sufficient and given sufficient quotations of a reliable source, to establish *the infallible evidence of the book called the Bible ;* yet it may be of interest and profit to notice other most common objections, those quite universally taught by leading scientists, and, therefore, believed by the masses. We now purpose to proceed, using as freely as the limits of this work will allow, quotations from said book on which we build and establish *our faith* and *hope.* It seems to me, that the creative act is the highest display of omnipotent power of which mortals can conceive. Truly, "the heavens declare the glory of God, and the firmament showeth His handiwork. Day unto day uttereth speech, and night unto night showeth knowledge. There is no speech nor language where their voice is not heard." Ps. 19 : 1–3. When we personify the mighty work of the Creator we are led to exclaim with Paul: "O, the depth of the riches both of the wisdom and knowledge of God! How unsearchable are His judgments, and His ways past finding out!" Rom. 11 : 33.

Had God's memorial ever been *universally* observed, man's adoration would have been upon the Creator, as the prime object of His worship and the *inevitable* results would have been that there never would have existed an *Idolater*, an *Atheist* nor an *Infidel.*

To undertake to search out the ways of the Almighty would be an act worse than folly by any of His created beings, but what He has been pleased to reveal in His word He has given to us and to all generations. (See Deut. 29: 29.)

David informs us that "the works of the Lord are great, sought out [or looked into] of all them that have pleasure therein." And further says: "He hath made His wonderful works to be remembered." Ps. 111: 2, 4. And at the completion of His works of creation He established a *memorial* of the acts He had performed. "And God blessed the seventh day and sanctified it, *because* that in it he had rested from all His work which God had created and made." Gen. 2: 3. And these are the words which he spake from Sinia amid the thunderings, lightning and smoke, which made an impression never to be forgotten. And this is His memorial: "Remember the Sabbath day to keep it holy." Ex. 20: 8. And why are we to remember it? "For in six days the Lord made heaven and earth, the sea, and all that in them is, and rested *the seventh day;* wherefore, [*for this very reason,*] the Lord blessed the Sabbath day, and hallowed it." Ex. 20: 11. Do you ask how long this memorial of creation was to last, and was there nothing to take its place? Let the inspired Word answer. Christ says: "Till heaven or earth pass, one jot or one tittle shall in nowise pass from the law." "Thy name, O Lord, endureth forever, and thy memorial, O Lord, *throughout all generations.*" Ps. 135: 13. "Thy Word is true *from the beginning*, and every one of thy righteous judgments endureth

forever." Ps. 119: 160. "My covenant will I not break, *nor alter* the thing that has gone out of my lips." (Ps. 89: 34.) "Know ye not that Jehovah, he is God; it is He that hath made us, and not we ourselves." Ps. 100: 3.

In giving the evidence concerning the inspired Word, I feel that, knowing what I do, "woe is me" if I give it not correctly. The *honest* difference of opinions that men may have in regard to the teachings of God's Word, they must settle between themselves and their God. It is not for me to say, or to announce to you what God means when He speaks, but if we have proven that God has spoken; then we have proven that He has spoken to you as well as to me, "by the mouth of all His holy prophets since the world began (Acts 3: 21), for this Word is unto us and our children forever." We believe that God's Word is its own expounder, and if others think differently, they have the same inalienable right as the author, and the same judge to whom accounts must be rendered. Our purpose is, and shall be, to *prove* the *Word* and *give* the *Word;* and we shall endeavor to do this by "rightly dividing the Word of truth;" neither "adding unto nor taking from" (Rev. 22: 18, 19), and leave the results to the reader.

The scientific principles of *"All Past Times,"* the records of all eclipses and transits in cycles, each in their order, since the record of man on the earth, will be given in the future progress of this present work; not for the purpose of establishing a *creed* nor the avowed faith of any creed or set of men, but for the benefit and interest of all such as may be benefitted by the facts — let them come from Jew or Gentile, or an Infidel historian.

We understand that if our sins and mistakes are confessed, they are taken by our High Priest, Jesus Christ, our advocate, and that they are placed back on the head of the anti-typical

scape-goat, the devil, and he suffers the penalty. But if we carry our own sins and mistakes we alone must be responsible for them; thus we lessen the punishment of his Satanic majesty by taking the responsibility of the results on our own shoulders.

How was the World Framed? Out of What was it Made?

The eleventh chapter of Hebrews is a record of the wonderful deeds of faith. "Through faith we understand the worlds were framed by the Word of God, so that things which are seen were not made of things which do appear." Heb. 11: 13.

It is here emphatically declared that God framed the worlds out of that which did not previously exist. It is impossible for our finite minds to grasp this wonderful declaration.

To comprehend this, or how an infinite power could accomplish the feat, we can only go back some six thousand years in the past, and from that date, in our minds-eye, view the vast abyss of ethereal space, the "outer darkness," the void now filled with the lights of Heaven. What can we behold? Simply blank — nothing. The host of heaven, the stars, did not then exist. "Without form and void (Gen. 1: 2), how were the heavens made?" Ans. "By the Word of the Lord were the heavens made, and *all the host of them* by the breath of His mouth. For He spake and it was done; He commanded and it stood fast." (Ps. 33: 6, 9.) The highest act of faith that we can conceive of is a Being who has called into existence the universe out of nothing. To believe this great truth we must credit the sacred Scriptures; for Paul tells us that "faith cometh by hearing, and hearing by the Word of God." (Rom. 10: 19.) The world is full of infidelity and atheism. These have no faith in the Mosaic record of creation. To the latter the rest day of the Creator, as a memorial, is of

no importance whatever. But with those who believe the Mosaic record, and their works correspond with their faith, it will be, and ever is, different. Those who believe, and their works do not correspond with their faith, have simply a dead faith. "Devils believe and tremble." If we believe it to be true that the six days of creation were long periods of thousands of years each, then the inconsistency of the Christians' God is manifest to the atheist and all others in requiring of man to *rest one* or *labor six* of those periods or days. But if you are inclined to "limit the Holy One," and say that "a twenty-four-hour day is insufficient to the task of any of the works that were wrought within the specific periods," we say, true. If the work of creation be the work of Nature all of eternity would be insufficient for the work. But if we will take the above record, "He spake and it was done, he commanded and it stood fast," then the time would be ample. We only have to turn back two or three pages, in this chapter to get the contrast of the "popular views."

Purpose of Creation.

"God Himself hath formed the earth and made it; He hath established it; He created it not in vain; He formed it to be inhabited." Isaiah 45: 18.

And the Psalmist says: "The heaven, even the heavens, are the Lord's; but the earth hath he given to the children of men." (Ps. 115: 16.) God will not be foiled in His purpose; when the earth is redeemed from the curse it will not then be inhabited by a race of rebels, but by the righteous. "For such as be blessed of Him shall inherit the earth, and they that be cursed of Him shall be cut off." Ps. 37: 22.

Now, we ask if God specified in particular for what purpose He made the sun, moon and stars? "And God said, 'Let there be lights in the firmament of the heaven to divide

the day from the night; and let them be for signs, and for seasons, and for days and years; and let them be for lights in the firmament of the heavens *to give light upon the earth,*' and it was so." Gen. 1: 14, 15.

But did not God make some of these to be inhabited? Which shall we believe? The Mosaic Record, by the man of God, who calls the *moon a light* (Gen. 1: 14–16), or the heathen Pythagorus who died before Christ 506, who was an idolator—a worshipper of the sun? And regarding the *common source of nature* as the essence of Deity on the authority of Pythagorus, Newton said that the moon had no light of itself; also that the day was caused by the sun. Moses says that light was divided from the darkness the first day, and the day and night were both made on the first period or day. Gen. 1: 4, 5. These periods or length of days were governed by these lights.

It seems that God has been particular to specify for what purpose these lights were made, and that purpose was, at least, twofold: First, for lights in the firmament of the heaven "to divide the day from the night;" second, "for signs and for seasons, and for days and years." As we understand, for the measurement and rules of time, something, if you please, by which man may reckon his time and the mariner his approximate whereabouts on the great seas.

Other Worlds than This.

To this thought there need be no reasonable objection while there is positive and demonstrated evidence that there is one or more worlds, and they are inhabited by people in the form of men and in the image of the Creator, the image of Him who said that "He made all things, and without Him was not anything made that was made." (John 1: 3.) These beings have been seen and handled, have lodged and ate with mortals,

and returned to their homes from whence they came. (See Gen. 18: 1, 2, 8; also Gen. 19: 1, 3, and many others might be given.) There is, therefore, no objections to there being other worlds *above*, hung upon nothing, or revolving or traveling through ethereal space; or founded without motion and established in ethereal space, sustained by the mighty power of God. To deny these facts would be to do violence to the Word and limit the Holy One. The psalmist says in speaking of the earth: "For He hath founded it upon the seas and established it upon the floods." Ps. 24: 2.

There is nothing said in the Holy Book of the limits of the *flood*, or *bounds* of the "*waters.*" (Gen. 1: 2.) They may be as boundless as ethereal space, ought we know, with other worlds on the same plane or the same waters divided by the everlasting mountains of congealed waters; and ice regions as the bounds with which God in His wisdom has placed between the rays of our sun and the worlds warmed by other bodies. "There is a path which no fowl knoweth, which the vulture's eye hath not seen; the lion's whelps have not trodden it, nor the fierce lion passed by it." (Job 28: 7-8.) "He hath *compassed* the waters with bounds until the day and night come to an end." Jeb 26: 10.

Travel from the north on any meridian line, or in any direction from the North Pole is South, and the terminus is the everlasting fields of ice. Go farther, if possible, and there awaits you, beyond the limits of the sun's rays, the Angel of death.

Do the Scriptures Teach that the Earth is a Globe.

We now purpose to give some *Scripture* evidence that the *earth is not a globe*, after which we propose to give, in the second part of this work, some *scientific* evidence, showing that the two do not antagonize each other when viewed in their proper light, or practically demonstrated.

That the Scriptures were not given to teach astronomy, geology or other sciences we do not believe. They were given to teach the *true* and only way of salvation. To claim that the Bible was not intended to teach science truthfully would be to declare that God Himself has stated and authorized His prophets to teach that which is utterly false! In giving the following we shall quote largely from an English writer, Parallax, of whom we shall say more ere we close this work.

"If the earth were a globe, it is evident that everywhere the waters of its surface, the seas, lakes, oceans and rivers must be sustained or upheld by the land, which must be underneath the water; but being a plane 'founded upon the seas,' and the land and the waters distinct and independent of each other, then the waters of the 'great deep' must sustain the land as it does a ship, an ice-island, or any other flowing mass, and there must, of necessity, be *waters below the earth.*" In the Newtonian astronomy, continents, oceans, seas and islands are considered as together forming one vast globe of 25.000 miles in circumference. This assertion will be seen to be entirely false, contrary to the plain, literal and manifest teachings of the Word of God.

"And God said, 'Let the waters under the heaven be gathered together unto *one place*, and let the *dry land* appear.' And God called the dry land *earth*, and the gathering together of the waters called He seas." Gen. 1: 9-10.

It would be an insult to an intelligent judge or jurors, or an audience, to claim before them that the manifest account of the Word of God and this accepted theory were in substance the same.

Do the Scriptures Teach that the Earth and Seas Constitute the Earth.

Instead of the word "earth" meaning both land and water, only the dry land is called earth (in the Scriptures), and the *seas* the gathering or collection of the waters in vast bodies. Earth and the great bodies of water are described as two distinct and independent regions, and not as together forming one great globe, which modern astronomers call "the earth." This description we shall confirm by several other passages of Scripture: "The earth is the Lord's and the fullness thereof; the world and they that dwell therein; for He hath founded it upon the seas, and established it upon the floods." Ps. 24: 1, 2.

"O give thanks to the Lord of Lords, that by wisdom made the heavens, and that stretched out the earth *above* the waters." (Ps. 136: 6.) "By the Word of God the heavens were of old and the earth standing out of the water and in the water." Second Peter 3: 5.

"Who with his strength fixed the heavens; and *founded the earth upon the waters.*"—Hermes' N. T.

"That the surface of the water is horizontal," says Parallax, [and we purpose to scientifically prove it in our second part] "is a matter of absolute truth, and as the earth is founded upon the seas and stretched out above the waters, it is of necessity a plane; and being a concrete mass of variable elements and compounds, with different specific gravities, it must be a floating structure, standing in and out of the waters, just as we see a ship or an iceberg."

I have heard argued at considerable length, by different ones, the following passage of Scripture, supposing it to teach the idea of the earth a globe suspended in void space: "He stretched out the north over the empty place, and hangeth the earth upon nothing." Job. 26: 7.

We have examined Dr. A. Clark on this passage, and he being a Newtonian philosopher, says the literal translation is, "On the hollow or empty waste;" and he gives the Chaldee version as his preference, which says: "He layeth the earth upon the waters, nothing sustaining it."

The rendering would convey this idea. He layeth it upon the waters which were previously empty or unoccupied by earth; nothing visible.

"Thou shalt not make unto thee any graven image or any likeness of anything that is in heaven above or that is in the earth beneath, or that is in the *water under the earth.*" Ex. 20: 4.

But let us notice a few more Scripture quotations:

"Thus, saith the Lord, which giveth the sun for a light by day, and the ordinance of the moon and stars for a light by night, which divided the sea when the waters thereof roar, the Lord of Hosts is His name. If these ordinances depart from before me, saith the Lord, then the seed of Israel also shall cease from being a nation before me *forever.* Thus saith the Lord: If heaven above *can be measured* and the *foundation of the earth* searched out beneath, I will cast off all the seed of Israel for all that they have done, saith the Lord."

Says Parallax on the above: "It is certain that God's promises to His people can no more be broken than can the height of heaven be measured, or the depths of the mighty waters—the earth's foundations—searched out or determined."

The fathomless character of the deep beneath, upon which the earth is founded, and the infinitude of heaven above, are here given as the emblems of the boundlessness of God's power and of the certainty that *all* of His ordinances will be fulfilled.

When God's power can be limited heaven above will be no longer infinite; and the "mighty waters," the "great deep,"

the "foundation of the earth," may be fathomed. But the Scriptures plainly teach us that the power and wisdom of God, the heights of heaven and the *depths of the waters upon the earth*, are alike boundless and unfathomable.

Does the Earth Move or Rotate?

The earth is stationary, and *nowhere* in the Scriptures is the earth spoken of as movable, except by a miracle or in a relative sense. And, on the other hand, the sun is not spoken of in the Scriptures as standing still, as fixed or having foundations, except it be by a miracle of God. The concentric and progressive motion of the sun over the earth is in every sense practically demonstrable; yet, the Newtonian astronomers insist upon it that the sun only *appears* to move, and that this *appearance* arises from the motion of the earth; that when, as the Scriptures affirm, "the sun stood still in the midst of the heavens," it was the earth that stood still and not the sun; that the Scriptures, therefore, speak falsely, and the experiments of science and the observations and applications of our senses are never to be relied upon! Whence comes this bold and arrogant denial of the value of our senses and judgment and authority of Scripture? A *theory* which is absolutely false in its ground-work, and ridiculously illogical in its details demands that the earth is round and moves upon axis, and in several other directions (as we shall show further on), and that these motions are *sufficient* to *account for* certain phenomena without requiring the sun to move; therefore, the sun does not move, but is a fixed body—his motion is only apparent! Such *reasoning* is a disgrace to philosophy, and fearfully dangerous at the best, to the religious interests of humanity. A few passages of Scripture here will suffice to confirm the above statements:

"In the heavens hath He set a tabernacle for the sun, which is as a bridegroom coming out of his chamber and rejoiceth as a strong man to run a race. His going forth is from the end of the heaven, and his circuit unto the end of it." Ps. 19: 4-6.

"The sun also ariseth, and the sun goeth down, and hasteth to his place where he arose." Ecclesiastic 1: 5.

"Let them that love the Lord be as the sun when he *goeth forth* in his might." Judges 5: 31.

"The sun *stood still* in the midst of heaven and *hasted not to go down* about a whole day." Josh. 10: 13.

"Great is the earth, high is the heaven, *swift* is the sun *in his course,* for he *compasseth* the heavens round about, and fetcheth his course again to his own place in one day." Esdras 4: 34.

Of Importance to the Religious World.

To the religious world this matter is most important—it becomes a sacred question of vital importance; it is complete in the confirmation of the entire Scriptures wherever referred to.

Does the Sun Move?

Says Parallax, p. 366: "In the religious and mythological poems of all ages and nations the fact of the sun's motion is recognized and declared." Christians especially, of every denomination, are familiar with and often read and sing with delight, such poetry as the following:

"My God, who makes the sun to know
His proper hour to rise,
And to give light to all below
Doth send him round the skies.

"When, from the chambers of the East,
His *morning race* begins
He never tires nor stops to rest,
But, *round the world* he shines.

"God of the morning, at whose voice
The cheerful sun makes haste to rise,
And like a giant doth rejoice
To run his journeys through the skies;
He sends the sun *his* circuit round
To cheer the fruits and warm the ground."

The above single verses are merely examples of what may be found in every hymn-book and collection of sacred poetry throughout the world. The sacred books of all nations, and the perceptions and instincts of the whole human race completely accord in respect to the motion of the sun and the convexity of the earth; and theoretical astronomy fails to present a *single fact* or experiment to support the contrary conclusion.

Christian and Jewish ministers, teachers and commentators find it a most unwelcome task to *reconcile* the plain and simple philosophy of the sacred Scriptures with the monstrous and contradictory teachings of modern theoretical astronomy. Dr. A. Clark, in a letter to his friend, the Rev. Thomas Roberts, of Bath, replying to questions as to the progress of the commentary he was then writing and his endeavors to reconcile the statements of Scripture with the Newtonian astronomy, says:

"Joshua's sun and moon *standing still* have *kept me going* for nearly three weeks! That one chapter has afforded me more vexation than anything I have ever met with; and even now I am but about *half satisfied* with my own solution of all the difficulties, though I am confident that I have removed mountains that were never touched before. Shall I say that I am heartily weary of my work — so weary that I have a thousand times wished I had never written one page of it, and am repeatedly purposing to give it up?" Life of Dr. A. Clark, 8vo. edition.

The Rev. John Wesley, in his Journal, writes as follows. "The more I consider them the more I doubt of all the systems of astronomy. I doubt whether we can with certainty know either the distance or magnitude of any star in the firmament; else why do astronomers so immensely differ, even with regard to the distance of the sun from the earth? Some affirm it to be only three and others ninety millions of miles." Extracts of Works of Rev. J. Wesley, third edition, 1849, by Moses London, p. 392, Vol. 2. In Vol. 3 of the same edition, p. 293, the following entry occurs:

January 1, 1765.

"This week I wrote a warm letter published in the *London Magazine;* the author thereof is much displeased that I presume to doubt of the modern astronomy. I cannot help it; nay, the more I consider the more my doubts increase, so that at present I doubt whether any man on earth knows either the distance or magnitude, I will not say of a fixed star, but of Saturn or Jupiter—yea, of the sun or moon."

In Vol. 13, p. 359, referring again to theoretical astronomy, he says: "And so the whole *hypothesis* of innumerable suns and worlds moving round them vanish into air."

Page 430 of the same volume, the following words occur: "The planets' revolutions we are acquainted with, but who is able to this day to *demonstrate* either their magnitude or distance, unless he will prove, *as is the usual way,* the magnitude from the distance and the distance from the magnitude."

In the same paragraph, speaking of the earth's motion, he says: "Dr. Rogers has evidently demonstrated that no conjunction of the centrifugal and centripetal forces can possibly account for this, or *even cause any body* to move *in an ellipse!*"

"There are several other incidental remarks in his writings which show that the Rev. J. Wesley was well acquainted with the Newtonian system of astronomy, and that he saw clearly

its non-contradictory and anti-Scriptural character. The supposition that the heavenly bodies are suns and systems of inhabited worlds is demonstrably false and impossible in nature, and certainly has no counterpart or foundation in Scripture." Parallax.

CHAPTER IV.

General Summary of Conclusions, Inevitable from Evidences Produced in Previous Chapters.

IN giving these conclusions we shall use the sentiments largely of Parallax and his words verbatim where they accord with evidence produced in the first part of this book.

At the close of this work we propose to give a synoptical biography of this noted philosopher, the author of "Zetetic Astronomy and Philosophy," whom we have quoted so largely, and to whom the world owes a tribute far greater than to a Newton, Galileo, Copernicus or Kepler. The quotations will be found on pages 375-406 of his work, "Zetetic Astronomy."

The Stars,

By Newtonians, are assumed to have positions so far from the earth that the distance is almost inexpressible; figures, indeed, may be arranged on paper, but in reading them no practical idea is conveyed to the mind. Many are said to be so distant that should they fall (to the earth), with the velocity of light 160,000 miles per second, or 600,000,000 of miles per hour, they would require nearly 2,000,000 of years to reach the earth !" Sir William Herschel, in a paper on "The Power or Telescopes to Penetrate into Space," affirms that with his powerful instruments he discovered brilliant luminaries so far from the earth that the light which they emitted could not have been less than *one* million, nine hundred thousand years in its progress ! Here again a difficulty is manifest; viz., if the stars begin to fall to-day, and with the greatest imaginable velocity,

that of light, 160,000 miles in a second, millions of years must elapse before many of them will reach the earth. But the Scriptures declare that these changes will occur suddenly—shall come, indeed, "as a thief in the night."

Chronology.

These statements, to those who have any faith in them, destroy the sense of all Scriptural authorized chronology. Christian and Jewish commentators (except the *astronomically* educated) hold and teach, on Scripture authority, that the earth as well as the sun, moon and stars were created about 4,000 years before the birth of Christ, or less than 6,000 years before the present time. But if many of these luminaries are so distant that it requires nearly two millions of years to reach the earth, and if, as is affirmed, bodies are visible to us because of the light which they reflected or radiated more than two millions of years, at their creation, and therefore they must have been shining and must have been created at least nearly two million years ago! This chronological theory is further demonstrated and published in this book from a work of scientific merit styled "All Past Time," by J. B. Dimblebly, editor of "The British Astronomical and Chronological Association," of London, England.

But the chronology of the Bible, unless by unwarrantable interpretation, teaches that the period of six thousand years has not yet elapsed since "the heavens and the earth were finished, and all the host of them!" And all was done in six literal twenty-four hour days. See Gen. 2: 1,2.

Sun, Moon and Stars as Lights.

"This modern theoretical astronomy also affirms that the moon is a solid, opaque, (non-luminous) body; that it is,

in fact, nothing less than a material world. It has even been mapped out into continents and islands, seas, lakes, volcanoes and volcanic regions; and the nature of its atmosphere (or its surface, supposing as many do, that an atmosphere cannot exist), and the character of its productions and possible inhabitants have been as freely discussed and described as though our philosophers were as familiar with it as they are with the objects on the earth. The light, too, with which the moon beautifully illuminates the firmament, is declared to be only borrowed—to be only the light of the sun, intercepted and reflected on the earth. These notions are not only opposed by a formidable array of well ascertained facts, but they are totally denied by the Scriptures. The sun, moon, and stars are never referred to as *worlds*, but simply *lights* to rule alternately the day and the night, and to be "for signs and for seasons and for days and years."

Glory of the Heavenly Bodies.

Does the moon shine with a borrowed light?

"There is one glory of the sun, and one glory of the moon, and another glory of the stars, for one star differeth from another star in glory." 1 Cor. 15: 41.

"And God said let there be *lights* in the firmament of the heaven to divide the day from the night.....And God made *two great lights;* the greater light to rule the day, and the lesser light to rule the night." (Gen. 1: 14-16) "O give thanks unto Him that made *great lights,*....the sun to rule by day; ....*and the moon and stars to rule by night.*" Ps. 136: 7-9.

"The sun is given for a light by day, and the ordinances of the moon and of the stars for a light by night." Jer. 31: 35.

"I will cover the sun with a cloud, and the moon shall not give her light by night. All the bright lights of heaven I will make dark over thee." Ezekiel 32: 7,8.

"Praise Him, sun and moon; praise Him all ye *stars* of *light.*" Ps. 148: 3.

"The sun shall be darkened in His *going forth*, and the moon shall not cause *her light to shine.*" Isa. 13: 10.

"Immediately after the tribulation of those days shall the *sun be darkened*, and the moon shall not give *her light.*" Matt. 24: 29.

"The sun shall be no more thy light by day, neither for brightness shall the moon give light unto thee.... Thy sun shall no more go down, neither shall thy moon withdraw itself." (Isaiah 60: 19,20.) ".... While the sun, or the light, or the moon, or the stars be not darkened." Eccl. 12: 2.

"The light of the moon shall be as the light of the sun, and the light of the sun shall be sevenfold." Isaiah 30: 26.

"And for the precious fruits brought forth by the sun, and for the precious things put forth by the moon." Deut. 33: 14.

Nothing is here said, nor is it said in any other part of the Scriptures that the sun *only* is a great light, and that the moon only shines by reflection. The sun is called "*greater light* to rule the day," and the moon the "*lesser light* to rule the night." Although of these two *great lights* one is less than the other, each is declared to shine with its own independent light. Hence, in Deut. 33: 14, it is consistently affirmed that certain fruits are developed by the influence of the sun's light only, and certain other productions are put forth by the moon.

That the light of the sun is influential in encouraging the growth of certain natural products and that the light of the moon has a distinct influence in promoting the increase of certain other natural substances, is a matter well known to those who are familiar with horticultural and agricultural phenomena; and it is abundantly proved by chemical evidence that the two lights are distinct in character and in their action on various

compounds. In no single instance are the two lights confounded, or regarded in the same character. On the contrary, positive statements are made to their difference in nature and influence. St. Paul affirms emphatically that "There is one glory of the sun and another glory of the moon, and another glory of the stars, for one star differeth from another in glory." 1 Cor. 15: 41.

"The sun became black as sack-cloth of hair and the moon became as blood." Rev. 6: 12.

If the moon has a light of her own, the above language is inconsistent, but if she is only a reflector, the moment the *sun* becomes "black as sack-cloth of hair," she could not remain as blood while the sun was thus blackened.

Up and Down—Do they Exist Farther than Relative Terms.

"God has spoken to man in two voices—the voice of *Inspiration* and the voice of *Nature.* By man's ignorance they have been made to disagree, but the time will come, and cannot be far distant, when those two languages will strictly accord; when the science of Nature will no longer contradict the science of Scripture." Professor Hunt in Parallax, p. 383.

According to Newtonians there is neither up nor down from the earth; shall we accept their teachings and chance the results of believing a *lie;* or, shall we take the numerous statements of the prophecy of all the prophets, which "came not in olden time by the will of man, but holy men of God spake as they were moved by the Holy Ghost?" (Second Peter 1: 20, 21.) If we accept the former theory we may *discard our own senses* and let the theory of accepted scientists have full control, and say that there is neither large nor small, round or square, a straight line or a curve, white or black; but if we use our own God-given senses, believe our own eyes, then

we have that which the Apostle Peter says was "more sure" [the never failing Word of God.] Peter states that they had "not followed cunningly devised fables, but were eye-witnesses of His Majesty;" and a "voice" from heaven came to confirm their sight and faith; and what he considered made the matter doubly sure was the Word of God "by the Holy Ghost." (See Second Peter 1: 16-21.) More than a score of passages could be given in this case that absolutely antagonize and forbid the Newtonian theory, but we will let a few suffice.

"So then after the Lord had spoken unto them [Peter, James and John] He was received *up* into heaven." Mark 16: 10.

"For as the heaven is high *above the earth.*" Ps. 103: 2.

"Elijah went *up* into heaven." 2 Kings 2: 11.

"Look *down* from thy holy habitation, from *heaven,* and bless thy people Israel." Deut. 26: 15.

"And the Lord came *down* upon Mount Sinai." Ex. 19: 20.

If the earth is a globe, according to the Copernican hypothesis, it necessarily must revolve in order to get the sun's rays on all parts, and it is evident to the most simple that the revolution is made complete every twenty-four hours. Therefore, that which is "up" at any *given hour of the day* would be "down" at the same hour of the night. This would make the above quotations a senseless jargon, and the Scriptures necessarily false. We readily see that at whatever point or moment we fix our eyes upwards, in less than one second we are moving our sight rapidly downwards. Before a sentence could be uttered, expressive of any object on which our eyes could rest that might be called "above," they would be millions of miles from the first position. The Lord says: "For my thoughts are not your thoughts, neither are your ways my ways, saith the Lord. For as the heavens are 'higher' than the *earth,* so are my ways higher than your ways, and my thoughts

than your thoughts." (Isaiah 55: 89.) He that made the heavens and the earth makes no mistakes, neither does He inspire men to do so. "No lie is of the truth." (Second John 2: 21.) And the truth is *no part* of a lie.

If we cannot believe Moses and the prophets we would not believe though one rose from the dead. Rather: "Let God be true and every man a liar." Rom. *3*: 4.

If we say that God inspired men to use their own language and thoughts it simply destroys the inspiration, and where is the standard for truth?

CHAPTER V.

The Ancients; Their History. Early Astronomers. Sages of the Present System.

THE authors of the present system of astronomy were the following, as quoted from the "Encyclopædia Americana:"

"Nicholas Copernicus, born at Thorn, on the Vistula, February 19, 1473.

"Tycho (Tyge) Brahe, born at Knubstrup, in Schonen, a province then subject to Denmark, in 1546; he died in 1601, aged fifty-five.

"Galilei Galileo, born at Pisa, Italy, in 1564; died January 8, 1642, aged seventy-eight.

"John Kepler, born at Weil, in Wurtemberg, in 1571; died in Ratisbon in 1650, aged sixty-one.

"Sir Isaac Newton, born December 25, 1642, at Lincolnshire, England; he died at Westminster, March 20, 1725, aged eighty-four.

"The history of astronomy begins with the most remote antiquity. The starry heavens must have been one of the first and most striking objects which attracted the attention of man, and his immediate wants compelled him to attend to the revolutions of the seasons, changes of the moon, etc. The *most ancient astronomical observations* known to us are the Chinese. Such an one, mentioned by Montucla (p. 455 of his work, Vol. 1), as follows: 'A conjunction of Saturn, Jupiter, Mars, Mercury and the moon occurred about 2,500 before our era.'

"The Chaldeans also boast of some very ancient astronomical observations, but Ptolemy only mentions two lunar

eclipses observed by them about 700 B. C. Still less importance does he ascribe to the astronomical knowledge of the Egyptians, although the placing of their pyramids in a position exactly facing the four cardinal poinst of the compass, the Zodiacs discovered in Egypt, and other circumstances are by no means calculated to give us such a disadvantageous idea of it.

"The theory of Bailly, a later historian of astronomy, respecting a nation settled in Middle Asia and possessed of profound astronomical knowledge, seems as unfounded as our acquaintance with Indian astronomy is slight. The science made great progress in Greece, and the Greek philosopher, Thales, born 640 B. C., calculated a solar eclipse. Pythagoras, also seems to have been possessed of astronomical knowledge. After him the Athenian, Meton, 433 B. C., introduced the famous *lunarcycle of nineteen years*, at the end of which time the new moon appears *on the same day of the year as at the beginning of it*, since nineteen solar years constitute very nearly 235 lunations, a discovery which was then regarded as so important that the calculation was engraved in letters of gold, whence the number which marks the year of the cycle is still called the *golden cycle*. Great progress was made in astronomy under the Ptolemies, and we find Timocharis and Aristillus employed about 300 years B. C. in making useful planetary observations. But they were far surpassed, in philosophical spirit, by Aristarchus of Samos, born 267 B. C., who, according to the indubitable evidence of Archimedes, taught the *double motion of the earth* around its axis and around the sun. About 100 years after him, Hipparchus determined more exactly the length of the solar year, the eccentricity of the sun's orbit, the precession of the equinoxes, and even undertook a catalogue of the fixed stars. From the time of Hipparchus a

chasm exists in the history of astronomy till the second century after Christ, when Ptolemy compiled a complete system of astronomy in thirteen books, which is best known under the name of 'Almagest, given by the Arabians, who translated it into their language in 827, and which, as the Ptolemian system of the world, notwithstanding its many errors exposed in the article 'Universe,' this work has maintained its value down to the latest times.

"Among the Romans, on the contrary, astronomy was never much esteemed, and no astrononiical discovery had its origin with them, though it must be observed that expressions occur in Seneca's questions of Nat., respecting comments which are worthy of a riper age; and the service likewise deserves mention which Julius Cæsar rendered.

"But with the irruption of the Barbarians on one side and the destruction of the Alexandrian library on the other, such a total stagnation occurred in the case of astronomy, as in that of the sciences in general, that we find no traces of astronomical study and observations till the ninth century, among the Arabs, whose translation of Ptolemy's works has already been mentioned.

"But we must not overrate the merits of the Arabian astronomers, since they confined themselves entirely to the system of Ptolemy and confounded the science with the dreams of astrology; though, on the other hand, the benefits which they have rendered by valuable observations of the fixed stars (many of which is well known still bear Arabic names), of eclipses, of the obliquity of the ecliptic, etc., and by the preservation of ancient mathematical works, which have come to us in their translations, are not to be forgotten.

"Among the Christian nations during this time a deep igno-

rance generally prevailed, but the cultivation of the astronomical sciences was not neglected.

"Thus the Emperor Fredrick II., who died in 1250, caused the Almagest (the Greek original being no longer extant) to be translated from the Arabic into the Latin, and King Alphonso of Castile about the same time invited to his court several astronomers and commissioned them to prepare a new set of astronomical tables, which, under the name of *Alphonsine tables,* has acquired much celebrity, but in the seventeenth century differed a whole degree from the true situation of the celestial bodies."—Encyclopædia Americana, pp. 434, 435.

We pass over several less important and less famous names in order to reach those on whom the present universally accepted system of astronomy *stands or falls.*

We shall notice these first in their chronological and contemporary order as they become notorious with the science of astronomy—much of it fabulous or falsely so-called.

In giving a synopsis of those who have been foremost in the promulgation and origin of this system, it will be our *special purpose* to see if there is an infallible evidence produced by any of these sages to prove the globular theory of the earth, which, of necessity, required axial and orbital motion.

"The first of the so-called *bright lights* in the cause was Nicholas Copernicus, born at Thorn, on the Vistula, February 19, 1473.

"'*Theoretical,*' says Webster: Speculation, speculative; not practical.'

"The Copernican *theory* was admitted by him to be merely assumption and not necessarily capable of demonstration. The following are his words: 'It is not necessary that a hypothesis should be true or even probable; it is sufficient that

it leads to the result of calculation which agrees with calculation. Neither let anyone, so far as hypothesis are concerned, *expect anything certain from astronomy* since that science *can afford nothing of the kind,* lest, in case he should adopt for truth things feigned for another purpose, he should leave this science more foolish than he came.'

"The hypothesis of the terrestrial motion was *nothing but an hypothesis,* valuable only so far as it explained phenomena, and not considered with reference to absolute truth or falsehood.

"Copernicus assumed that the sun was the center of the system; that the earth was a planet, also Mars, Venus, Mercury, Jupiter, Saturn, etc. That these revolved around the sun in the time as given herewith: Mercury in eighty-seven days, Venus in 224, the Earth in 365, Mars in one year and 321 days, Jupiter in eleven years, and Saturn in twenty-nine years; reckoning these years and fractions according to our standard, or earth's time.

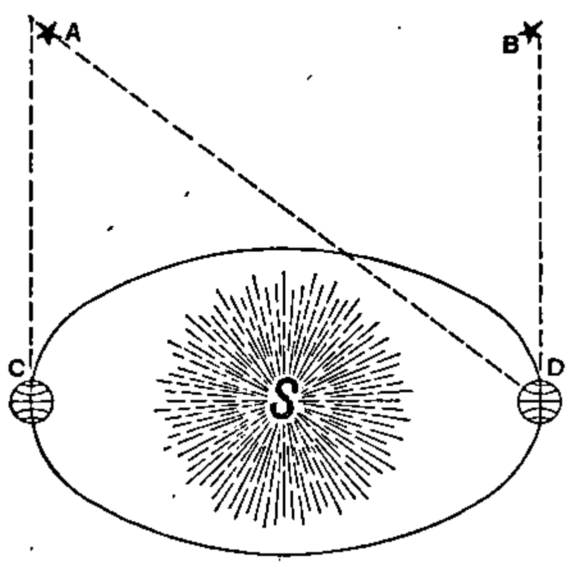


Fig. 3.

"The Copernican theory also required in its terrestrial motion that the earth moved in an elliptical path round the sun, as here represented by diagram. S, is the Sun; C, the earth in June; D, its position in December.

"When desired to offer some proof of this orbital motion he suggested that a given star should be selected for observation. The first observation C. to A., was recorded; an observation again at the end of six months, when the earth was supposed to have

passed to D, the other extreme of its orbit; to the astonishment of the assembled astronomers the star was observed in exactly the same position, D. B., as it had been six months previous.

"It was expected that it would be seen in the direction of D. A., and the observation would demonstrate the earth's motion from C. to D., and also furnish with the distance, the elements necessary for calculating the actual distance of the star A. to B.

"The above experiment has many times been tried and always with the same general result. No difference whatever has been observed in the lines of sight, C. A. and A. D., whereas every known principle of optics and geometry would require that if the earth had really moved from C. to D.; the *fixed star* A. should be seen in the direction D. A.

"The advocates of this hypothesis of orbital motion, instead of being satisfied from the failure to detect a difference in the angle of observation, that the earth could not possibly have changed its position in the six months, were so regardless of all logical consistency that instead of admitting and accepting the consequences they, or some of them, declared that they could not yield up the theory, on account of its explaining certain phenomena, but demanded that the star A. was so vastly distant, that, notwithstanding that the *earth must have moved* from C. to D. this great change of position would not give a readable difference in the angle of observation at A., or in other words the amount of parallax (annual parallax it was called) was not perceptible.

"Since the period of the above experiments many have declared that a very small amount of yearly parallax has been detected. But the proportion given by different observers has been so various that nothing definite and satisfactory can yet

be decided upon. Tycho Brahe, Kepler and others rejected Copernican theory, principally on account of the failure to detect any parallax or displacement of the fixed stars. Dr. Bradley declared that what many called parallax was merely aberration. In the year 1839, Mr. Henderson having returned from filling the position as royal astronomer to the Cape of Good Hope, and discussing a series of observations made here with a large mural circle of the bright star 'A Centauri,' announced as a positive fact the measurable parallax for that star; the parallax assigned to A Centauri, is so very nearly a whole second in amount [0''.98] that we may speak of it as such, 98-100 of a second. It corresponds to a distance from the sun of 18,918,000,000,000 statute miles. Others have put the parallax of a star in Cygnus 0''.35, 0''.51, and 0''.57. This corresponds to somewhat less than twice the distance of A Centauri or to nearly thirty-eight billions of miles.

"It might seem to a non-scientific mind that the difference above referred to of only a few fractions of a second in the parallax of a star constitutes a very slight amount, but these differences involve differences of millions of miles as will be seen by the quotation from the *Edinburgh Review* for June 1850:—

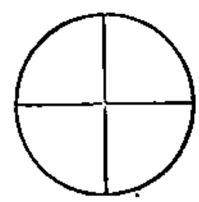
" 'The rod used in measuring a base line is commonly ten feet long, and the astronomer may be said only to apply this very rod to measure the distance of the fixed stars! An error in placing a *fine dot*, which gives the length of a rod, amounting to one five-thousandth part of an inch, will amount to an excess seventy feet in the earth's diameter; of 316 miles in the sun's distance, and to 65,200,000 miles in that of the nearest fixed star!'

"The second point to which we would advert is, that as the astronomer in his observatory has nothing to do with ascertaining length as distance, except by calculation, his whole

skill and artifice is exhausted in the measurement of angles. For it is by these that spaces inaccessible can be compared." Parallax, pp. 81-87.

Happily, *a ray of light is straight.* [Yes, and so is the *line of sight;* we cannot look around the corner or over an object that obscures the vision.] Were it not so there were an end of our astronomy. It is as inflexible as adamant, which our instruments unfortunately are not. Now, the angle of *one second,* 3,600th part of a degree, is a subtle thing; it is an apparent breadth, utterly invisible to the unassisted eye, unless accompanied by so intense a splendor, as in the case of the fixed stars, as actually to raise by its effect on the nerve of sight a spurious image, having a sensible breadth.

A silkworm's fiber, or a cobweb line used as a center or vertical and right angle in the telescope, thus: subtends an angle of one second at three and one-half feet distance from the eye. A ball two and one-half inches in diameter must be removed in order to subtend an angle of one second, 43,000 feet, or about eight miles, while it would be utterly invisible to the sharpest sight aided even by a telescope of 100 powers.


Fig. 4.

Yet it is on the measurement of *one single second* that the ascertainment of a *sensible parallax* in any fixed star depends; and an error of one-thousandth of that amount (a quantity still immeasurable by the most perfect of modern astronomical instruments, would place a fixed star too far or too near by 200,000,000 of miles!

From the "Encyclopædia Americana," advocates of the Copernican theory of the spherical motion of the earth, we copy the following: "Of the actual magnitude and distance of the stars we know nothing. The diameter of the earth's orbit is 2,000,000,000 miles, yet we can detect no difference in

their apparent places, viewed from the opposite points of this diameter. A change of place amounting only to a second would be detected by the accuracy of modern observations; geometrical considerations, therefore, prove that the nearest star cannot be *less* than twenty billions of miles distant from us."

Sufficient has been said in this chapter to show the complexity, uncertainty and unsatisfactory state of the question of mobility or yearly parallax of the earth, as hypothetically advocated by Copernicus and held to by modern astronomers and scientists in general, to forever annihilate by actual demonstration the evidence of any motion in an orbit around the sun. We can find as great a parallax, and just as certain and satisfactory, if not more so, by taking a ten-foot pole for a base line, as we can from the earth's orbit, two hundred millions of miles in diameter! Our space and time is limited, yet we can not refrain from giving an illustration of the evidence of the motion of the earth and measurements of distances of the stars, etc., as found in the *Commercial* of Buffalo, N. Y., taken from an English magazine, January 19, 1888:

Measuring the Stars.

"To learn the distances of the stars, it is first necessary to determine what is known as the star's parallax, or its angle of direction when viewed from two opposite points in the earth's orbit, and this is what renders the problem so extremely difficult, for nearly every star that has been examined for the purpose of learning its distance has failed to show *any parallax whatever*, and in the few instances where a parallax has been recognized the angle has been found to be exceedingly small. *No star* in the heavens has a parallax equal to *one second* of arc, but all thus far determined are below even this small angle."

The star which gives the greatest parallax of any, and is believed to be the nearest to our earth is Alpha Centauri, a first magnitude star in the heavens and never visible in our latitude. But even this star's parallax is only ninety-three hundredths of a second, which corresponds to a distance of 221,000 times the sun's distance from the earth, or over twenty billions of miles! And this, remember, is the nearest star known to astronomers. The earth's orbit viewed from this star would appear the same as a circle six-tenths of an inch in diameter, thus:

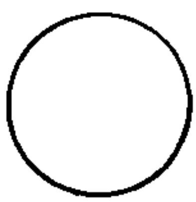


Fig. 4 *a*

Viewed at a distance of one mile; (this would require a telescope of fifty powers to see it as large as a pin head at that distance; to this, any person who ever looked through a telescope will testify) and the radius of that orbit—the distance which separates the sun from our earth, ninety-one millions of miles—would be entirely hidden by a fine thread or spider's web one twenty-fifth of an inch in diameter, held 650 feet from the eye! In other words, a line 484,000,000 miles long, looked at broad-side, would shrink into a mere point, and if our sun was removed to that distance, it would shine with a light only equal to that of the north star, while its parallax would be the one hundredth of a second! Once more: "To traverse the milky way, of which our solar system forms a part, light requires 15,000 years; and to reach it from some of the distant nebulae, which appear like faint clouds, it must travel 300 times that period or nearly 5,000,000 years!" Such is the formidable, wild fancy, that the Copernican theory leads men—they know not where.

Reader, we simply call your attention to that Word which we have proved infallible, and ask you to compare the same with these statements above, and we let this matter rest for your own consideration and judgment. "God made two great

lights; the greater light to rule the day, and the lesser light to rule the night; he made the stars also. And the evening and the morning were *the fourth day.*" (Gen. 1: 16, 19.) "And on the *seventh day* God *ended* his work which he had made." "*Thus the heavens* and *the earth were finished,* and *all the host of them.*" (Gen. 2: 1, 2.) Thus we see that these things were made and were performing their functions *all* inside of *seven twenty-four-hour days.* That these days were twenty-four-hour days no one can deny without doing violence to the Scriptures.

Concerning the wisdom of man and the extent of his knowledge, and concerning the creation, the Lord asked Job some questions which Job declined, even an attempt, to answer. But there are those at the present day who will readily give an answer, though it annuls the decrees of God Himself.

We will notice a few of these questions:—"Gird now thy lions like a man, for I will demand of thee and answer thou me. Where wast thou when I laid the foundation of the earth? Declare if thou hast understanding. Who hath laid the measures thereof if thou knowest; or who hath stretched the line upon it? Whereupon are the foundations thereof fastened; or who laid the corner-stone thereof?" (Job 36: 3-6). "He hath compassed the waters with bounds, until day and night come to an end." (Job 26: 10.) Can anything pass the bounds? Listen to the Almighty when He speaks: "There is a path which no fowl knoweth, and which the vulture's eye hath not seen; the lion's whelps have not trodden it, nor the fierce lion passed by it." Job 28: 7-8.

Some ask what is the nature of these bounds that are so fixed? Ans. "The waters *are hid as with a stone,* and the face of the deep is frozen." (Job 38: 30.) Then may we not justly conclude from these assertions that the bounds, which the Lord

in His providence has fixed, are the *everlasting mountains* of ice? Yes, He has covered the waters, "the face of the deep," on which He founded the earth (Ps. 24: 2), with that which is as impregnable to the navigator as the rock of Gibraltar.

These facts the testmonies of surviving navigators will corroborate, and a page or two will be of interest to some.

Exploring Expedition by Capt. Wilkes.

We extract the following from the United States exploring expedition in the South Seas, by Capt. Wilkes:

"On the 16th of January, 1840, our vessels were in longitude 150° 46′ E., latitude 65° 8′ S. This night we were beating with frequent tacks, in order to gain as much southing as possible. Previous to it becoming broad daylight, the fog rendered everything obscure, even at a short distance from the ship. I knew that we were in close proximity to icebergs and field ice, but from the report of the lookout at sunset, I believed that there was an opening or large bay leading to the southward. The ship had rapid way on her, and was much tossed about, when in an instant all was still and quiet; the transaction was so sudden that many were awakened from sound sleep, and all well knew from the short experience we had had, that the sensation of sound and motion usual at sea, was proof that we had run within the walls of ice—an occurence from which the feeling of great danger is inseparable. The watch was called by the officer of the deck, to be in readiness to execute such orders as might be necessary for the safety of the ship. Many of those from below were seen hurrying up the hatches, and those on deck straining their eyes to discover the barriers in time to avoid accident. The ship, still moving rapidly along, some faint hope remained that the bay might be a deep one, and enable me to satisfy my sanguine hopes and belief relative to land. The feeling was awful and the uncertainty most trying, thus to enter within the icy barrier blindfolded, as it were, by impenetrable fog, and the thought constantly occurring that both ship and crew were in

imminent danger; yet I was satisfied that nothing could be gained but by pursuing this course. On we kept, until it was reported to me by attentive listeners, that they heard the low and distant rustling of the ice. Suddenly a dozen voices proclaimed the barrier to be in sight, just ahead. The ship, which a moment before seemed as if unpeopled, from the stillness of all on board, was instantly alive with the bustle of performing the evolution necessary to bring her to the wind, which was unfavorable to return on the same tack by which we had entered. After a quarter of an hour, the ice was again made ahead, and the full danger of our situation was realized. The ship was certainly embayed; and although the extent of sea room to which we were limited was rendered *invisible* by the dark and murky weather, yet that we were closely circumscribed was evident from having made the ice so soon on *either tack*, and from the audible rustling around us. It required several hours to extricate the ship from this bay. Few are able to estimate the feelings that such an occasion causes to a commander who has the responsibility of the ship and crew, operating as a heavy weight upon his heart, and producing a feeling as if on the verge of some overwhelming calamity. All tends to satisfy him that nothing can guide him in safety through, or shield from destruction those who have been entrusted to his care, but the hand of an all-wise Providence. The last two days we had very many beautiful snow-white petrels about. The character of the ice and snow became entirely changed; the tabular formed icebergs prevailed, and there was comparatively little field ice. Some of the bergs were of magnificent dimensions, one-third of a mile in length, and from 150 to 200 feet high, with sides perfectly smoothed as though they had been chiseled. others again, exhibiting lofty arches of many colored tints, leading into deep caverns, open to the swell of the sea, which rushing in, produced loud and distant thunderings. A little further onward would be seen a vast fissure, as if some valuable force had rent in twain these mighty masses. Every noise on board, even our own voices, reverberated from

the massive and pure white walls. The tabular bergs are like masses of beautiful alabaster; a verbal description of them can do little to convey the reality to the imagination of one who has not been among them. The time and circumstances under which we were viewing them, threading our way through these vast bergs, we knew not to what end, left an impression on me of these icy and desolate regions that can never be forgotten."

We have not space in this work to give the interesting and wonderful narrow escapes of vessel and crew, as given by Captain Wilkes; we simply give this to show the dangers that exist in the regions of the *bounds*, which Providence has set. We give their circumstances of return and refer you to the work for further knowledge in this respect.

"Captain Hudson now came to the conclusion of returning north. 'After,' as he says, 'thoroughly turning over in my own mind the state of the ship, with the head of the rudder gone, hanging by two braces, and in such a state that we hardly hope to make it answer its purposes again in encountering the boisterous weather we should have to pass through before reaching the first port; the ship considerably strained, her starboard spardeck bulwarks gone as far forward as the gangway, the gripe off and the stern mutilated; fully satisfied from this state of things that she was perfectly useless for cruising among icebergs and the accompanying dangers in these latitudes. There was but one opinion as to the ship's returning north, with the exception of Mr. Emmons and Mr. Baldwin, who thought the rudder might stand, providing we did not get near the ice or fall in with icebergs; this would be to effect little or nothing and result in loss of time. I accordingly put the ship's head north, determined to proceed to Sidney to effect the necessary repairs, so as to be able at the earliest possible day to join the squadron.' Such were the dangers and difficulties, by the admirable conduct of officers and crew and consummate seamanship of her commander, that the Peacock was enabled at this time to escape."—Arctic Cruise, by Capt. Wilkes, chap. 17, pp. 134-198.

Arctic and Antarctic Icebergs.

For the purpose of noticing these formidable walls and barriers that are the terminus of navigation in any direction man can travel, we quote a short article from the *Youth's Instructor,* published at Battle Creek, Mich., Oct. 24, 1888:

"It is not generally known, even to sailors, that there is a marked difference between icebergs in the Arctic and Antarctic circles. Those of the Arctic Ocean are irregular in shape, with lofty pinnacles, cloud-capped towers and glittering dome, whereas the southern icebergs are flat-topped and solid-looking. The former reach the shore by narrow fords, but the formation of the latter is more regular. The northern are neither so large nor so numerous as those met with in the Southern Ocean. In 1855 an immense berg was sighted in 42° south latitude, which drifted about for several months and was sighted by many ships. It was 300 feet high, sixty miles long and forty miles wide, and was in shape like a horseshoe. Its two sides enclosed a bay forty miles across. A large emigrant ship ran into this bay and was lost and all on board. Only about one-ninth of an iceberg is visible above the water. There are several well-authenticated accounts of icebergs 1,000 feet high having been sighted in the Southern Ocean. This would make their total height 9,000 feet or nearly two miles." [Such were never seen north.]

Tycho (Tyge) Brahe's System of Astronomy.

Tycho, as universally called, was born in Knubstrup in Schoman, a province then subject to Denmark, in the year 1546. He assumed the principle that the earth remains fixed and immovable in the center of the universe, and that the sun and all heavenly bodies revolve round it; but succeeding astronomers have rejected Brahe's system, and adopted that of Copernicus. Says the "Encyclopædia Americana": "We are indebted to his observations for a more correct catalogue of the fixed stars, for several important discoveries respecting the

moon and the comets, and the refraction of the rays of light, and for important improvements in astronomical instruments; they served also as the basis of Kepler's astronomical labors. The most distinguished of the opponents of the great Copernicus was Tycho Brahe."

The principle authority that Tycho adduced in support of this opinion was, the literal sense of various passages of the Bible where a total absence of motion is ascribed to the earth, but although he did much injury to science by supporting this erroneous opinion we are under infinite obligations to him for the great exactness of his observations, which opened to his pupil and assistant, *Kepler of Wurtemburg*, (born 1571, died 1631) the way to more accurate discovery of the form of the celestial orbits. Kepler, moreover, demonstrated by hypothesis, that, in each elliptical revolution of the planets around the sun, an imaginary straight line drawn from the latter to the former (the *radius rector*), always describes equal areas in equal times; and lastly, that in the revolution of the planets and satellites, the squares of the times of revolution are as the cubes of the mean distances from the larger body. These three important points are comprehended under the name of *Kepler's Laws.*

Brevity demands that we abridge this narrative of these worthy sages and notice briefly that world-renowned philosopher,

Galilei Galileo.

Galileo was born at Pisa, Italy, 1564, and died January 8, 1642, aged seventy-eight years. Says the "Encyclopædia Americana": "In 1581 Galileo entered the University of Pisa to attend lectures on medicine and the Aristotelian philosophy. The spirit of observation for which he became distinguished was early developed. When only nineteen years old, the swinging of

a lamp from the ceiling of the Cathedral in Pisa led him to investigate the laws of the oscillation of the pendulum, which he was the first to apply as a measure of time. He left it incomplete, however, and it was brought to a perfection by his son, Vincenzo, and particularly by Huygens, the latter of whom is to be viewed as the true inventor of the pendulum clock. In 1586 he invented the hydrostatic balance. In 1859 he was made Professor of Mathematics in the University of Pisa. In 1597, he invented his geometrical and military compass. The mathematical truths which he discovered after 1602 are highly important; for example, that the spaces through which a body falls, in equal times, increase as the numbers 1, 3, 5, 7; that is if a body falls fifteen Paris feet, (about sixteen English), in one second, it will fall forty-five in two, seventy-five in three, and so on. Whether the thermometer was his invention it is difficult to determine; perhaps he only improved it. The telescope which he found in Holland remained not only imperfect, but useless; this he improved and turned to the heavens and in a short time made a series of most important discoveries. His most remarkable discovery was that of Jupiter's satellites, January 7, 1610. He also observed Saturn's rings, though he had not a just idea with regard to it. Galileo's name, meantime, had grown so celebrated that the Grand Duke Cassus II, in 1610 appointed him Grand Ducal Mathematician at Pisa. While thus employed he had declared himself in favor of the Copernican system in his work on the sun's spots, and was therefore denounced as a heretic. A congregation of cardinals, monks and mathematicians examined his work, condemned it as *highly dangerous* and summoned him before the tribunal of the Inquisition. The veteran philosopher was compelled to go to Rome in the winter of 1633, languished some months in the

prison of the Inquisition, and was finally compelled to renounce his former views in presence of an assembly of monks, cardinals, etc.

Abjuration of Galileo.

The abjuration and denunciation of his own hypothesis, or that which he had previously advocated, whether honestly or for self-aggrandizement, we leave for Him who knows the intents and purposes of the hearts of men, to judge; yet all who have investigated this case of Galileo may have a private opinion at least. The best authority that we can get of those who still advocate the Copernican theory, says, concerning the oft-repeated legend that on arising from his knees he said to a friend, "It does move, though," this is probably without foundation.

The abjuration of Galileo can be found on page 188 of his life, published for the School Cabinet Library by Hyde & Co., of Boston. His *sentence* is on page 184, signed by seven cardinals. We give it in toto:

"I, Galilei Galileo, son of the late Vincenzo Galileo, of Florence, aged seventy years, being brought personally to judgment, and kneeling before you, *Most Eminent* and *Most Reverend Lords, Cardinals, General Inquisitors* of the Universal Christian Republic against heretical depravity, having before my eyes the Holy Gospel which I touch with my own hands, swear, that I have always believed, and now believe, and with the help of God will in future believe, every article which the Holy Catholic and Apostolic Church of Rome holds, teaches and preaches. But because I had been enjoined by this Holy Office altogether to abandon the false opinion which maintains that the *sun is the center* and *immovable,* and forbidden to hold, defend or teach the said *false doctrine* in *any manner,* and after it had been signified to me that the said doctrine is repugnant to the Holy Scripture, I have written and printed a book in which it treats of the same doctrine now condemned, and adduce reasons with great force in support of the same,

without giving any solution, and therefore have been judged grievously; suspected of heresy, that is to say, that I held and believed that the sun is the center of the universe and immovable and that the earth is not the center and movable. Willing, therefore, to remove from the minds of your Eminences and every Catholic Christian, this *vehement* suspicion *rightfully* entertained toward me, with a sincere heart and *unfeigned faith*, I abjure, curse and detest the said errors and heresies and generally every other error and sect contrary to said Holy Church, and I swear, that I will never more in future say or assist anything, verbally or in writing, which may give rise to a similar suspicion of me; but if I shall know any heretic or *any one suspected* of heresy, that I will denounce him to this Holy Office or to the Inquisition and Ordinary of the place in which I may be. I swear, moreover, and promise, that I will fulfill and observe fully, all the penances which have been or shall be laid on me by this Holy Office. But if it shall happen, that I violate any of my said promises, oaths or protestations (which God avert), I subject myself to all the pains and punishments which have been decreed and promulgated by the sacred canons and other general and particular constitutions against delinquents of this description. So God help me, and His Holy Gospels which I touch with my own hands.

"I, the above named Galileï Galileo, have abjured, sworn, promised and bound myself as above, and in witness thereof with my own hand have subscribed this present writing of my abjuration, which I have recited word for word.

"At Rome, in the Convent of Minerva, June 22, 1633, I, Galilei Galileo, have abjured as above with my own hand."

We now purpose to give a brief synopsis of the life and death of the latter of the great astronomers on whom the present, modern and universal system of astronomy stands—or falls, for fall it must!

Sir Isaac Newton.

The creator of Natural Philosophy was born at Woolsthorpe, in Lincolnshire, December 25, 1642, and at his birth

was so small and weak that his life was despaired of. On the death of his father, which took place while he was yet an infant, the manor of Woolsthorpe became his heritage. His mother sent him, at an early age, to the village school, and in his twelfth year to the town of Grantham. While here he displayed a decided taste for philosophical and mechanical inventions, and, avoiding the society of other children, provided himself with a collection of saws, hammers, and other instruments with which he constructed models of many kinds of machinery. Some knowledge of drawing being necessary in these operations, he applied himself, without a master, to the study. The walls of his room were covered with all sorts of designs. After a short period, however, his mother took him home for the purpose of employing him on the farm and the affairs of the house, and sent him several times to the market at Grantham with the produce of the farm. A trusty servant was sent with him, and the young philosopher left him to manage the business, while he himself employed his time in reading. A sun dial which he constructed on the wall of the house at Woolsthorpe is still shown. The irresistible passion for study and science finally induced his mother to send him back to Grantham, where he remained till his eighteenth year, when he was entered at Trinity College, Cambridge, in 1660. Newton had the good fortune to find the celebrated Doctor Barrow, professor of mathematics. In order to prepare himself for the lectures Newton read the text-books in advance; these were Sanderson's Logic and Kepler's Treatise on Optics; the Grome of Descartes was also one of the first books that he read at Cambridge. He next proceeded, at the age of about twenty-one, to study the works of Wallis, and appears to have been practically delighted with the celebrated treatise of that author entitled, *"Arithmetica Infinitorum."* The matter

that Newton deduced from these authors is too complicated and foreign from our points which we wish to show to here enumerate them, but will refer the reader to any good encyclopædia for details.

We shall give a few paragraphs to show the character of the man and the foundation of the system upon which modern astronomers build their theoretical castles.

"About 1665, being about to quit Cambridge on account of the plague, he retired to Woolsthorpe and now turned his attention more closely to subjects of natural philosophy. As he was one day sitting under an apple-tree the fall of an apple led him to reflect on the nature of that remarkable principle which urges all bodies toward the center of the earth. 'Why,' he asked himself, 'may not this power extend to the moon? and, if so, what more would be necessary to keep her in her orbit about the earth?' He considered that if the moon was retained about the earth by terrestrial gravity, the planets which move around the sun ought similarly to be retained in their orbits by their gravity towards that body. Setting out with the law of Kepler [see fore part of this chapter], that the squares of the times of revolution of the different planets are proportional to the cubes of their distances from the sun, Newton [supposed that he had] found by calculation that the force of solar gravity decreases proportionately to the squares of the distances; and having thus determined the law of gravity of the planets toward the sun, he endeavored to apply it to the moon—that is, to determine the velocity of her motion round the earth by means of her distance, as settled by astronomers, and of the intensity of gravity as shown by the fall of bodies to the earth's surface. To make this calculation it is necessary to know the exact distance from the surface to the center of the earth, expressed in parts of the same measure that is used

in marking the spaces described in a given time by falling bodies at the earth's surface, for their velocity is the first term of comparison that determines the intensity at this distance from the center, which we apply afterwards at the moon's distance. It then remains only to be seen if gravity when thus diminished has precisely the degree of energy necessary to counteract the centrifugal force of the moon supposed to be caused by her observed motion in her orbit. Unfortunately at that time there existed no correct measure of the earth's dimensions. Newton was obliged to employ the imperfect measures then in use, and found that they gave for the force which retains the moon in her orbit a value greater by one-sixth than that which results from her observed circular velocity. This difference seemed, to his cautious mind, a strong proof against his bold *conjecture*. He imagined that some unknown cause modified, in the case of the moon, the general law of supposed gravity indicated by the motion of the planets. ....In 1666 he returned to Cambridge, was chosen Fellow of his college (Trinity) in 1667, and the next year was admitted A. M.; but he did not disclose his secrets even to his instructor, Dr. Barrow. In 1668, however, Mercator published his "Logarithmotechnia," in which he had obtained the area of the hyperbola, referred to its asymptotes by expanding its ordinate into an infinite series, which was the main secret of *Newton's method.*"....

"In the course of 1666, his attention had been accidentally drawn to the phenomena of the refraction of light through prisms. His experiments led him to conclude that light, as it emanates from the radiating bodies, is not a simple and homogeneous substance, but that it is composed of a number of rays endowed with equal refrangibility and possessing different coloring properties. In 1669, being appointed professor of

mathematics, preparing to lecture upon optics, he endeavored to mature his first results, and composed a complete treatise in which the fundamental properties of light were unfolded, established and arranged by means of experiments alone without any mixture of hypothesis, a novelty at that time almost as surprising as these properties themselves. Thus it appears that three great discoveries which form the glory of his life,—his method of fluxions, his theory of Universal Gravitation and the Decomposition of Light, were conceived before his twenty-fourth year. In vain did he declare that he neither advanced nor admitted any hypothesis whatever, and that his sole object was to establish and connect facts by means of the laws of nature. This severe and abstract method of reasoning was little understood, and it is hardly conceivable into what minuteness of detail he was obliged to enter. *So much was he disgusted* with these difficulties that he *gave up* the intention of printing his lectures on optics with his treatise on series. Before quitting the list, however, he addressed another paper (1675) to the Royal Society, completing the account of his results and his views on the nature of light. This treatise, united with his first paper on the analysis of light, afterwards served as the base of the great work, Treatise on Optics, (1704) in which, however, the experimental investigation of the phenomena is more extensive and more strictly separated from hypothesis.

"In his paper of 1675, after excusing himself for proposing a conjecture as to the nature of light, and declaiming that it had no connection with the *facts* which he had discovered, he goes on to give one which he should be inclined to consider *most probable if he were obliged to adopt any.* In his letter he proposed as matter deserving attention, to verify the motion of the earth by direct experiment, viz., by letting bodies fall from

considerable height and observing if they follow exactly a vertical direction; for if the earth turns, since the rotary velocity at the point of departure must be greater than at the foot of the vertical, they will be found to deviate from this line towards the east instead of following it exactly as they would do if the earth did not move. *This demonstration, however, failed to prove anything* in favor of the earth's motion.

"He would sometimes rise, and suddenly by some conception, would sit on his bedside for hours together, and would forget his meals, unless reminded of the necessity of taking some nourishment. It was not until 1686 that he finally concluded to present his work to the society, at the expense of which it was printed in 1687. Not more than two or three of his contemporaries were capable of understanding it, and more than fifty years elapsed before the great physical [supposed] truth which it contained was thoroughly understood by the generality of scientific men. In 1687 Newton was one of the delegates sent by the University to maintain its rights before the High Commission Court when they were attacked by James II. and in 1688, was elected by the University to the Convention Parliament, but never distinguished himself in that body.

"One morning, 1692, he had accidentally shut up his little pet dog Dimond in his room, and on returning found that the animal by upsetting a candle on his desk had destroyed the labors of several years. On perceiving his loss he only exclaimed, 'Oh, Dimond! Dimond! you little know the mischief you have done.' But the grief caused by this circumstance injured his health, and M. Biot shows that it impaired his understanding. This fact of a derangement of his intellect, according to Biot, explains why Newton, though only forty-five years

old when the *Principia* was published, never after gave to the world a new work in any branch of science, and merely published some which had been composed.

"In 1723 Newton made an attempt to show the fulfilment of the Prophecies of Holy Writ. In his historical account of two notable Corruptions of the Scriptures, he discusses the two passages in the Epistle of St. John and St. Paul, relating to the Trinity, which he supposes to have been altered by copyists. At this period of his life the reading of religious works, with the conversation of his friends, formed almost his only amusement, after performing the duties of his office. He had almost ceased to think of science; and during the last ten years of his life, when consulted about any passage in his works, he would reply, 'Ask Mr. De Moivre; he knows better than I do.' When his friends expressed their admiration of his discoveries, he said, 'To myself I seem to have been as a child playing on the sea-shore, while the immense ocean of truth lay unexplored before me.' His countenance was rather *calm than expressive;* his manner languid, though his health good until his eightieth year, when he suffered from a calculous disorder, which occasioned his death, March 20, 1727." Encyclopædia Americana.

Says Dr. Brewster in regard to Newton's writings: "The great mass of Newton's papers came into the possession of the Portsmouth family through his niece, Lady Lymington, and have been safely preserved by that noble family. There is reason to believe that they contain nothing which could be particularly interesting to science, but as the *correspondence* of *Newton* with the contemporary philosophers must throw considerable light on his personal history, we trust that it will ere long be given to the public."... Brewster's Life of Newton.

"The Fall of the Apple, or the Tipsy Philosopher."

The following lines were taken from an English Magazine, *Earth*:

Sir Isaac sat under his apple tree,
Quaffing his good old wine,
He eyed his decanter right merrily;
And lauded the fruit of vine.

"Ho! bring me another full bottle," he cried,
"And carry the 'empties' away;
"For wine aids reflection when fitly applied,
"And I would be pensive to-day."

He drank and he studied, he studied and drank,
Until he could study no more!
Then into a slumber he quietly sank,
And varied his thoughts with a snore:

But a breeze shook the tree under which he reclined,
And, alas! broke the good man's repose,
For an apple dislodged by the troublesome wind—
Struck him full on the bridge of the nose.

Then up started Isaac, his face all aglow
At the insult he thought he'd received,
And quickly looked round for his impudent foe,
But in vain as may well be believed

He searched in the garden, he searched in the house,
He searched in the neighboring lanes;
Declared if he found him he'd certainly douse
The rogue in the pond for his pains.

But useless his search, he returned and sat down;
Another full bottle was brought;
But still on his face sat a terrible frown,
As the key to the mystery he sought.

The wind blew more fierce and ripe apples fell
In multitudes thickly around;
Till another one lodged on his organ of smell,
Rebounded and rolled on the ground.

"Eureka," he cried, "I've discovered the cause,
"And value the pain not a straw,
"Since 'tis so, 'twill teach me in future to pause,
"Ere hasty conclusions I draw."

He ponder'd long time, and he drank deep and oft,
And looked most remarkably wise;
As he peered on the ground, then gazed up aloft,
With wisdom and wine in his eyes.

"What causes the apples to fall to the ground,
"And why do they first strike my nose,
"And why does the garden appear to turn round,
"Can any the reason disclose?"

* * * * * * * * * * * *

"Yes, the earth's going round, I am certain of that,
"(I wish for a while 'twould be still),
"Therefore, as it goes *round*, it cannot be *flat;*
"Therefore must be as round as a pill.

"And what causes the apples to fall on my nose
"And from thence to the surface of earth,
"Where, their motion suspended, they lay in repose,
"To what do these forces give birth?"

He thought on it deeply, he pondered it long,
Ideas in his brain tried to enter,
One entered at last. "Yes, I cannot be wrong,
"Attraction draws all to the *(s)center.*

"I'll write me a book, my scheme I'll evolve,
"A book to astonish the nation--
"And with two learned words every question I'll solve,
"*Attraction*, and—ah!—*Gravitation*."

Round went the orchard as Sir Isaac mused;
Till giddy, he fell to the ground,
And there as he lay, with his senses confused,
Our sage even felt it go round.

His faithful man-servant at last sought him out,
And carried him quickly to bed.
"Yes, 'tis certainly *rolling*, of that three's no doubt;"
Was all the philosopher said.

It is unreasonable to suppose that a man could be sane and sober to have conceived these laws of "attraction and gravitation" from the falling of an apple.

Thus we see the weak and uncertain character of the two last, so styled, great philosophers of the world on which the

Nations have erected this colossal laboratory of deception. Let us look back a few pages and draw a conclusion from the character and words of these men. Copernicus admitted his theory to be merely an assumption "not necessarily true," and he further adds: "Neither let anyone, so far as astronomy is concerned, expect anything *certain* from astronomy, since that science can afford nothing of the kind." Next Tycho "hindered" the work by contending for the *literal* and manifest passage of Inspiration. Galileo renounced all his own teachings as heretical and abominable in the light of Holy Writ.

And lastly, Newton loses his reasoning powers—in short, becomes insane, and his *contemporary* friends admit this to be true, also the great mass of his writings to be preserved more as a relic than importance to mankind. And, what is more, the Christian world has yet to ascertain which has produced the greatest amount of unbelief in God and His Word—Tom Paine, Hume and Voltaire, or the advocates of the Copernian theory of astronomy.

It seems most consistent to believe that those who profess Christianity and are supposed to be honest and educated in the things that appertain to the life hereafter have the greatest control of minds; hence, we see the necessity of each understanding the Word for himself.

CHAPTER VI.

ALL PAST TIME.

By the British Chronological and Astronomical Association, Memorial Hall, London Street, Bethnal Green, E.

Mr. J. B. Dimbleby, Editor.

THIS association consists of a large and increasing number of chronologists and others, all of whom acknowledge one method in determining past time, viz., by the arbitrary but sure rule of astronomical cycles and measurements; in other words, by the movements of the orbs of the solar system, which originate and control time. There can be no other method for determining time correctly; hence, Chronology, which, like Astronomy, has been imperfect, is now systematized and is rendered an "exact science." It is Astronomy practically applied and enlarged — applied by making that science subservient to measurements of time instead of confining it to the less certain results of distance, and enlarged by calculating and classifying all past eclipses and transits, the former being associated, as they occur, with many great events of history, which render their periodical recurrence more impressive, interesting and useful to the intelligent mind.

The objects of the association are: To authoritatively maintain and make known the concensus of the science of time, thus definitely and correctly obtained; to remove the ignorance which exists amongst mankind through an imperfect knowledge of the elementary character of time, and to

systematize and simplify history, which, through the absence of scientific data, is misunderstood and sometimes doubted instead of being admired.

The work already achieved by scientific Chronology is a complete and absolute control of every day since history began and time was instituted on the earth, viz., from the world's epoch known as Creation, or the refabrication of the earth and the formation of moral man. The transactions of the association, which are continually issued, show how conclusively the definite character of that epoch has been obtained and how perfectly all astronomical phenomena proceed upon five lines of Lunar, Solar and Planetary time, from the first day of that period to the present time. Another great achievement of scientific Chronology is, that by the classification and enumeration of eclipses and transits they have been reduced to a system of great practical utility as metrical indicators for proving the whole or any fractional part of past time. This had long been wanted in order to settle controversy. There is yet a third achievement which is deserving of special notice, viz., the discovery of the beautiful and encouraging fact that all Biblical history is astronomical, being unalterable Lunar time, marked off in knots of seven days, and hence all the dates of Scripture fall with precision on the lines of scientific time like the cogs of a wheel. It thus becomes clear that the Book of Genesis, which gives us records of the earliest history of our race, is by its dates a marvelous compendium of the movements of planetary orbs and supplies that point of time which chronologists and astronomers had long been desirous of obtaining in order to verify all subsequent periods of history and celestial phenomena. Too much cannot be said of this splendid discovery.

Preface.

It will be evident to the readers of "All Past Time" that we are no longer dependent upon human opinion, and that the evidence we now have at our command is that of scientific testimony, research and demonstrated experience.

The additions to the present issue are:

1. Six pages showing how the calculations have been made for determining the date of the *first solar eclipse.* This section concludes with a diagram of all the past years as supplied by the eclipses. I have thought it better to do this, because it will be seen that when presented in clock-like form, it is not possible to extend or diminish the natural working of either of the three revolving cycles, any more than that of an ordinary meter or watch. I submit this diagram, which I have called "The Eclipse Chronometer," as most valuable accession to our astronomical knowledge and unquestionable proof of the length of time from its institution unto the first day of the year O to the present period. Only learned men can deny this accuracy, and I have no hesitation in saying, as a student of science, that it will beat out of the world all theories of prehistoric man. It is just as easy to disbelieve the records of a clock of wheels as to deny the cycles of eclipses. *Not a tongue can be used against them.* Reflection shows us the absolute certainty of the periods defined by eclipses, and as they corroborate the first and all succeeding epochs of history, that man were mad who contradicted them. They tell us what was the first day and year of time, and every recurring eclipse thunders, as the artillery of the heavens, the unalterable dates of Scripture history. Had any of the twelve dates of the first eight chapters of the Book of Genesis been one day different to what they are, they would have been disproved by the eclipses. To every intelligent reader, I would say that the more this is

thought of, the greater will be its splendor and importance.

2. The second important addition to the present issue comprises four pages of the intercalary periods of Scripture. As the Bible is the most ancient book in the world and its time purely astronomical, these four pages will be of great service to antiquarians, and full of interest to Biblical men.

3. Owing to many letters which teem upon me throughout the year, I have also given this year four pages of prophetic periods, treating in a scientific way of those fulfilled and those awaiting fulfilment. Upon one of these periods I desire to say a few words. We have during the past twelve months, for the first time, obtained a clear and definite understanding of the remarkable prophecy of the crucifixion as stated in Daniel 9: 25. Many able men have tried their hand at the solution of this period; but until Dr. Alder Smith, of Christ's Hospital Schools, London, took up the matter, the clear definition of the period "From the going forth of the commandment to restore and build Jerusalem unto the Messiah," was not known. We can now understand it to a day, and it is plain that every man who has any claim to intelligence, whether Jew or Mohammedan, will see that Jesus of Nazareth was the Christ.

4. Because the Book of Judges has been regarded as difficult to form into consecutive history, I have given its historical and astronomical time, to which three pages are devoted. These will be very useful in theological colleges, where "All Past Time" has many readers.

5. Sundry additions have been made this year, comprising: "The Sabbath Day not of Hebrew Origin," "The Scientific Accuracy of the Periods assigned to the Long Lives of the Patriarchs." Of the latter, I marvel to still find unlearned men giving their opinions on a subject of which they appear to know nothing. To determine whether these periods—either sepa-

rately or unitedly—are correct, we have only to see whether they carry the Solar Cycle forward, and particularly the Lunar Cycle, which supplies the order, character and succession of eclipses, and we then find the years assigned to the lives of the patriarchs are required with all the precision with which they are given. Theories fall when science advances.

In conclusion, I urge upon scientific and Biblical men the importance of using a longer period of time than one year, which is a very elementary standard of time for teaching science or history. It is better to use 651 years, a period which returns the eclipses in the same way as the vernal equinox annually returns the spring. J. B. DIMBLEBY.

Memorial Hall, London street, England,

[The writer has been thus particular in giving the origin and brief epitome of the author of this *Chronological work*, that the readers may be able to place a proper estimate (however skeptical they may be in regard to the author's views) on demonstrated facts in regard to Bible Chronology. We glory only in the truth: "Honor to whom honor is due."

COMPILER AND AUTHOR.]

All Past Time.

ACCURACY FIRST—ARGUMENT AFTERWARDS.

[As science advances theories collapse. "Facts the Foundation—Truth the Crown."]

"It would be difficult to explain in a book," said the late Lord Chelmsford, "what a clock is and what is its practical use, unless numerous diagrams were employed. But when the knowledge is obtained, supposing it had not been received early in life, the learner would smile at the simplicity of the construction, and be thankful all the days of his life for the useful information he had obtained." This is a good illustra-

tion of the position of every person who has unfortunately no knowledge of time as pointed out day by day by the revolving orbs of Heaven, which are in the precision of their movements, the originators and umpires of the moments and numbers of years; and when, after a few simple words of explanation, the learner comprehends the grand dial formed by the mechanism of the skies; when, indeed, the thought flashes into his mind which gives him the power to discern their common movements as he does the hands of a clock, and to listen to the voice of their periodical phenomena, such as eclipses and transits, as the repeating chimes from the Belfry of Heaven, he will feel that he has acquired a vast amount of practical information, that scales of ignorance fall from his eyes, and all history, hitherto unsystematized, or perhaps regarded as doubtful, will be portrayed as pictures before his admiring mind. He will regret that so much useful information has not been taught when at college or school, and that after all he has learned, his education in common and practical things, has been without a basis and incomplete. It is to give that information that the pages of this book have been written, the object of which is to teach, even to ordinary minds, that all past time can be known by astronomical measurements or periodical cycles. When these are pointed out—which are as simple as the dial of a parish clock—the reader will find that the statement that "this is an age of scepticism," is only such because it is an age of ignorance; that the human mind having obtained an imperfect view of the domain of one or two of the higher sciences, has unnecessarily swerved from the lines of history. This is a common mistake, but we now find by the higher achievements of modern science, that what were supposed to be history's weakest points, have become its strongest forts. Chronology has been an imperfect science,

but it is now the most exact of all sciences, and instead of being dependent upon individual judgment, it is now systemized by measurements as unalterable and arbitrary as the multiplication table. [Or the Throne of the Universe.] The result is, the same products are obtained by all men, and history has become a science. Astronomy has also been largely benefitted by this accession. It is now as much applicable to time as to objects of distance, and by the classification of eclipses and trancits, which could not have been accomplished without the correct knowledge of time supplied by Chronology, its domain has been extended 4,000 additional years, and its phenomena systemized.

By my table of eclipses published in this book and endorsed by the British Chronological Association, the correct number of any year can be proved. For instance, we learn from Josephus that just before King Herod died (which from Roman history we know was in 3998 A. M.) there was a total eclipse of the moon. If the reader turns to the "List of Astronomical Years," by which all time is measured, he will find by this same eclipse what year was our 1880, because he will observe by the team of about 70 eclipses, given in the "Bird's Eye View of Eclipses of the Christian Era," that it always occurs in Line 2, or second year of each team extending over eighteen years and eleven days. As the Astronomical Years show that the team began in 3997, the eclipse when seen by Josephus was in 3998, our Lord being then nearly two years old as St. Luke tells us. The Astronomical years furher show that in 5878 the team was again new, hence the eclipse was due in the following year, 5879, our 1879, It is in our Almanac for December 17, 1880, because we are a year in advance of correct time through erroneously beginning our year 1 on 4000, instead of 4001 A. M. What an amazing lot of foolish controversy would

be avoided if men proved all years by eclipses! A glance of the eye shows that this same eclipse was in the second year of Adam, and the years obtained from Scripture history require its occurrence in year 2 A. M.

Explanation.

There are three Solar Cycles in this book. No other has existed. They are: 1—Antediluvian, giving the years from O to the end of 1721 A. M., formed of seven years. 2—Ancient Hebrew, from 1722 to the end of 3999 A. M., formed of fifteen years. 3—Christian Era, from 4000 A. M., which we compute as 1 A. D, to present time, formed of twenty-eight years. There is no Solar Cycle without weeks of Seven Days, and their existence proves that *unbroken weeks have come down to us from year* O. They are formed by the dates found in history, two or three of which are quite sufficient to construct them by a natural enumeration of the seventh days in each of the twelve months of the year. They are really clocks. A Cycle is a wheel. Hence we speak of a "bicycle," a vehicle of two wheels. Applied to time, a cycle is a complete revolution, when the point of commencement comes round again. It is formed by the precise number of years which brings the same day of the week on the same day of the month. Hence it is not possible to write eight Antediluvian years, because the eighth year would be like the first, having the same dates of the month on the same days of the week. Like the first year (See Antediluvian Solar Cycle) an eighth year would be written 7, 14, 21, 28, as the dates of the seventh, or Sabbath days. It would be the same with every month, and the whole seven years of the Solar Cycle. Hence we have the evidence of arithmetical testimony that the Antediluvian Solar Cycle was a continued repetition of seven years, as ours is of

twenty-eight years. We obtain its commencement, Saturday, on the seventh of the first month, from Gen. 2: 2, 3, as the first seventh or Sabbath day.

These seven years as written are the dates of Sabbath or seven days consecutively produced by counting seven. Thus seven must be followed by fourteen, and so on. To prove that all the dates written from the twelve months of each year, are Sabbath days, we have only to remember that there can be no more nor less than 354 days in Lunar years, which was the ancient year, because it is formed by the revolutions of the moon. As the moon revolves around the earth in twenty-nine and one-half days, the twelve months of the year must alternately possess thirty and twenty-nine days in order to keep up her movements—twelve lunations or months (Moon-eths,) in a year. This is a system now followed by the Jews, Turks and Chinese, who use the original Lunar Year, the months of which are more astronomical than our Pagan, Solar year, which, although a perfect measure of time, can begin and end anywhere, and have months of irregular length. The Lunar year, and each month of the year, must begin with a new moon. If we then notice the alternate months of a Lunar year; always thirty or twenty-nine days, we must write the dates as given in the Solar Cycle. Thus—7, 14, 21, 28, for the first month. As there are thirty days in that month we have two left; therefore, as two and five are seven, the first Sabbath or seventh day of the second month fell on the fifth. (See the Antediluvian Cycle.) Then as this second month had the dates of the Sabbath as 5, 12, 19, 26, and contained twenty-nine days, there are three days left. These three and four make the first Sabbath of the third month to fall on the fourth of that month, and so on to the end of the year and Cycle. As the Cycle ends with twenty-nine, and there are no more days in

the month, the point for beginning another Solar Cycle of seven years is reached. It will hence be plain that as the years proceed in sevens, and we have the dates of the flood on the fifth year of the Cycle, the year of the flood falls on 1656, when taken in sevens and adding five. This is the year supplied in Gen. 5, as shown at the foot of the Cycle. Of course, the first year is reckoned O.

The next thing to be noticed is that intercalary, or extra, days were required to make lunar years, which are formed of 354 days, equal to 365, which is the length of solar years. It is clear that this was always done by the Antediluvians by using seventy-seven days at the end of the Cycle—seven times eleven are seventy-seven—this is eleven weeks. The Lunar year is eleven days short of the Solar. This plan would not disturb the Sabbath day. When it did, just a week would be taken, because we find Biblical time has all been made Solar. The Lunar year was divided by the ancients into weeks and days, but not the Solar, which was to them as a period; but if they had omitted to bring up the shorter Lunar year of 354 days by taking up eleven extra to make it up to 365, the seasons of the year would have soon been reversed. That these extra days were most carefully observed by the Antediluvians is proved by the application of the Lunar Cycle hereafter explained, and that such intercalary days were used at the end of the Solar Cycle of seven repeating years is evident from the dates of the Flood. Noah went into the ark on the first day of the Solar period, which in the fifth Lunar year—the Solar having begun eleven days later in the second, third, fourth and fifth—had got so late as to begin that fifth year on "the 17th of of the second month." It is very interesting to observe this. We get a peep into Antediluvian affairs. The time would doubtless be one of great festivity. It was also a Sabbath day,

and Noah left the ark at the end of the Solar year. By using seventy-seven days at the end of the Cycle its dates were never disturbed, and the Lunar and Solar years began on the same day with the commencement of each Solar Cycle. In this way, also, the dates of Creation were reinstated, viz., Sunday the first day and Saturday the seventh. That the dates of the Sabbath days were always the same as those on the Solar Cycle—indeed, *men cannot alter lunar years without moving the moon from her orbit*—is proved by the previous 120th year occurring on the *self-same day*, that is, of the week and date of the month as Noah's diary informs us (Gen. 7: 13). These are all matters of history. [And God said let there be lights in the firmament of the Heaven to divide the day from the night; and let them be for signs, and for seasons, and for days, and years.....And God made two great lights; the greater light to rule the day and the lesser light to rule the night. He made the stars also. Gen. 1: 14-16.]

Like the line of history, all the lines of Astronomical Time were formed by working backwards from the present period. They could be obtained in no other way. Much could be said of their power and companionship for proving an important fact, that nothing can be added or taken away from the years of history. For instance, if an eclipse takes place on May 10th, it indicates that a certain number of years has occurred to bring it up to that date. But if it occurred on the 10th of June, we should know that forty-two years had been omitted by history, because the date would not coincide with the year. Again, we cannot run away with the eclipses without taking the transits with us. To add a month to an eclipse, we should have to push the sun forward in her orbit, in order to reach the only place opposite to the node of Venus where we can see her in transit, and Venus also would have to be driven

onward with an accelerated motion to reach her node. In fact, we cannot take an hour out of one of the Five Astronomical Lines of Time without disturbing every orb in the universe. Before these lines of time all history must bow and every man be dumb.

The First Line of Time.

HISTORICAL DATES AND PERIODS, SCRIPTURAL AND SECULAR.

The B. C. is the true one, before 3996, and the letters refer to the years of the Ancient Hebrew Solar Cycle. ⊙ denotes Eclipse No. 1., Line 1., and astronomical measurement.

A. M.							B. C.
0	Creation of the World. ⊙.....................						3996
	Antediluvian History from Gen. 5:—						
	Seth was born when	Adam		was	130	years old.	
	Enos	do	Seth	"	105	"	
	Cainan	do	Enos	"	90	"	
	Mahaleel	do	Cainan	"	70	"	
	Jared	do	Mahaleel	"	65	"	
	Enoch	do	Jared	"	162	"	
	Methus'l'h	do	Enoch	"	65	"	
	Lamech	do	Methuselah	"	187	"	
	Noah	do	Lamech	"	182	"	
	Gen. 7:11. Flood came when Noah			"	600	"	
				Add	——		
1656	Flood—5th year Antediluvian Solar Cycle..................................				1656		2340
	Add from Gen. 11:—						
	Arphaxad was born after the Flood				2	years.	
	Salah was born when	Arphaxad		was	35	years old.	
	Eber	do	Salah	"	30	"	
	Peleg	do	Eber	"	34	"	
	Reu	do	Peleg	"	30	"	
	Serug	do	Reu	"	32	"	
	Nahor	do	Serug	"	30	"	
	Terah	do	Nahor	"	29	"	
	Gen. 12:4 compared with 10:32 shows that Abraham left Ur in Terah's year...............				204...	And Ex. 12:41 compared with Num. 33:3 shows it was 15th of seventh month, Tuesday.	1914
				Add	——		
2082 *a*	Table, Ancient Heb. Sol. Cycle.			Total	2082		

A. M. B. C.

2513 *l* The Exodus, Tuesday, 15th of the 7th month, at "the end of 430 years" * ⊙................ 1483

2992 *k* Foundation of Solomon's Temple laid in the 480th year afterwards, I. Kings 6: 1, on Monday, 2d of 2d sacred month Zif (8th civil month.) (See 2. Chron. 3: 3.)...................... 1004

3000 *d* Dedication of Solomon's Temple, Wednesday, 7th, 1st civil (7th sacred) month............ 996

3029 *c* End of Solomon's reign of 40 years. (Foundation of Temple was his 4th)............... 977

The reader will see that by the above two tables we clearly arrive at the year 2082 A. M. He will next observe that from the middle of the year to the middle of 2513 was "the end of 430 years," or the 2513, mentioned in Exod. 12: 41, and from thence to the foundation of Solomon's Temple, "480 years," (I. Kings 6: 1) we reach 2993 for that event in Solomon's 4th year. Hence as he reigned 40 years we take the 4 off and add 36 to 2993, which makes 3029 when he died. This is the shortest and the most simple way of carrying on the chronology. The year 2082 was table *a*, the first on the Solar Cycle; Exodus year was table *l*, in both years the self-same day of the week and date was Tuesday, 15th of the 7th civil month (or legal month according to law.)

The reign of Saul, the first Hebrew King, was 40 years. David reigned the same number of years. The italic letters refer to the vear or table of the Solar Cycle.

3029 *c* Rehoboah ascended and reigned 17 years. 2 Chron. 9:31 and 12:13-16............... 967

3046 *e* Abijah ascended and reigned 3 years. 2 Chron. 12:16 and 13:2.......................... 950

* Observe the words, "to the end," otherwise from the first day of the date to first day of 430 years afterwards would not reach 2513. Moses was a good chronologist. He would probably have mentioned 7th month, 2082, but it was now 1st sacred. (See Ex. 12: 2.)

A. M.		B. C.
3049	*b* Asa ascended and reigned 41 years. 2 Chron. 14:1 and 16:13......................	947
3090	*d* Jehosaphat ascended and reigned 25 years. 2 Chron. 17:1 and 20:31....................	906
3115	*n* Jehoram sole king. He had previously shared the throne with his father for four years. 2 Chron. 21:1 and 19:20, also 2. Kings 8:16. He thus reigned 8 years, but chronologically 4. The passage of 2 Chron. 21:19 is not a good translation. The meaning is that Jehoram died in the intercalary days at the end of two full years (solar and lunar), table *c* of the Solar Cycle. It is a common expression and a splendid way of dating accurately when the historical event allows it.	881
3119	*c* Ahaziah ascended and reigned 1 year. 2 Chron. 22:1–2..............................	877
3120	*d* Athaliah, a woman, usurped power (2 Chron. 22:12) for six years. "In the seventh year" (23:12) Joash was proclaimed; that was 7th of his life. See also 2 Kings 11:1.	876
3126	*j* Joash, ascended in his seventh year and reigned forty years, 2 Chron. 24:1. He died in the intercalary days of 3170. See margin of 24:23; the year of the Solar Cycle was table *i*. Again a splendid date. By such precise dating we cannot miss the true years.	870
3166	*e* Amaziah ascended and reigned twenty-nine years, 2 Chron. 24, 27 and 25:1.........	830
3195	*d* Uzziah, or Azariah, ascended and reigned 52 years, 2 Chron. 26:1, 3..................	801
3247	*k* Jotham ascended and reigned 16 years, 2 Chron. 27:1..............................	749
3263	*l* Ahaz ascended and reigned 16 years, 28:1..	733
3279	*m* Hezekiah ascended and reigned 29 years, 29:1.	717
3308	*l* Manasseh ascended and reigned 55 years, 33:1.	688

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3363 *g* Amon ascended and reigned 2 years, 33:20, 21. ⊙ 633

3365 *i* Josiah ascended and reigned 30 years, 34:1. 631

3395 *i* Jehohaz ascended and reigned three months when he was dethroned by Necho, King of Egypt, 2 Chron. 36:1-4. (See Egyptian History.) 601

3395 *i* Jehoiakim ascended and reigned 11 years, 36:5, when he met with a miserable end by the army of Nebuchadnezzar. 601

3406 *e* Jehoiachin, a youth was placed on the throne, but was also deposed like his predecessor and carried to Babylon, From the middle of this year, 70 years of Captivity began. See Captivity and Ezekiel's years. 590

3406 *e* Zedekiah was made king by Nebuchadnezzar, and reigned 11 years. See 2 Chron., 36:11. 590

INTERESTING EVENTS.

3416 *o* Jewish monarchy ended and temple burned. The events were as follows: In the ninth year of Zedekiah, which ended on the middle of 3415, table *n*, on Sunday the tenth day of the fourth civil month, which was the tenth sacred, Nebucadnezzar pitched against Jerusalem. See 2 Kings 25:1, Jeremiah 39:1 and Ezekiel 24:1. The seige lasted nearly to the end of the next year 3416, table *o*, for on Friday, the 9th day of the 4th (10th civil) month, there was no bread left, and all the Hebrew men of war fled in the night between the two walls via the King's garden. They ran across the plains toward Jericho, but were overtaken by the Chaldeans and the king and his sons made prisoners. The city was thus broken up, and Zedekiah being taken before Nebucadnezzar, his sons were slain in

his presence, after which his eyes were put out. In the next month, which was 5th sacred, namely on Thursday, the 7th, the Babylonian army began to burn the city. On Sunday, the 10th, the temple built by Solomon was in flames. The king's house and all the great buildings were consumed by fire and the walls of the city were leveled to the ground. These events should be followed on the Solar Cycle. They are all astronomical time, but if the foregoing years of the patriarchs had been recorded as one less or more, these dates could not be proved by the Solar Cycle, nor by the eclipses and transits. For the sake of extreme accuracy of detail, I must state that the history viewed upon the Solar Cycle—which is the proper course—shows that the year 3415 was the latter half of Zedekiah's 9th and the first six months of his 10th. In like manner, 3416 was last half of his 10th and first six months of his 11th.

In the next year, 3417, the eclipses were ⊙ No. 1 and ⊙ No. 2, in the beginning of the 3d and 10th Lunar months, producing the dates of the week, as shown by the Solar Cycle and mentioned in recording the historical events. There would also be a transit of Mercury in 3406, when Zedekiah ascended.

For the continuation of the First Line of Time the reader must turn to the several books or Scripture history in the parts of this work, such as Ezekiel, Ezra, Zechariah, Haggai, Esther and Nehemiah. In these books we have a continuation of accurate history, as will be seen by the use of the letters indicating the table or year of the Solar Cycle. By noticing that the Solar Cycle consists of 15 years, it must begin when the

years alternately end with 2 and 7, and also by affixing a letter to each year of the cycle, it is impossible to miss any day of time.

The other books of Scripture as given in this work, also corroborate this First Line of Time in the same way so that we have proof after proof of the accuracy of All Past Time.

3569 *c* The last Biblical date, and Solar Cycle, brings the First Line of Time down to a reference to the intercalary days of 3569 A. M., which was 427 B. C., and the 23rd year of Artaxerxes (see also "Persian Kings.") Therefore, from this point of time we deal with uninspired testimony, but it is voluminous, as it is supported by secular and monumental history; nevertheless, the letter or table of the Solar Cycle will always supply the correct year.

We have also the eclipses, records of which start from 3101 A. M., or 903 B. C., (old calculation) which was 101 years after Solomon dedicated the Temple, and this eclipse line is again corroborated by the transits of Venus and Mercury.

Of all secular history, we will take that of Rome as being most straight forward and well adapted for the continuation of this First Line of Time. The first year of Rome was 3246 A. M., table *j*, and Jesus Christ was born in the 750th year of Rome, 3996 A. M., and also table *j*. We, therefore, for the sake of brevity proceed as follows:

3246 *j* 1st year of Rome completed, the foundation being in 749 B. C. 750
3441 *j* One hundred and ninety-fifth of Rome......... 555
3636 *j* Three hundred and ninetieth of Rome.......... 360
3831 *j* Five hundred and eighty-fifth of Rome........ 165

A. M. B. C.

3996 *j* Seven hundred and fiftieth of Rome.

3996 *j* Jesus Christ born, at the end of the 3rd civil month, our December.

3997 *k*

3998 *l*

3999 *m*

4000 *n* First year of Christian Era completed, commencing with the 4th month.

4001 *o* Second year of Christian Era.

4002 *a* Third year of Christian Era.

CHRISTIAN ERA.

Now that we arrive at our own years, all our difficulties commence, because our years are unscientific and do not begin with the proper month, which according to ancient history and astronomical science *should be at the end of September*, a proper period for the introduction of man when the fruits of the earth were ripe. ["And God said, Behold, I have given you every herb bearing seed, which is upon the face of all the earth, and every tree, in the which is the fruit of a tree yielding seed; to you it shall be for meat." Gen. 1: 29.] The reader must give his careful attention in order that we may land correct time upon our Solar Cycle. It will already be seen that we are wrong in computation, thus 4002 is not our year 2, because we foolishly began with 4000 instead of 4001, that is to say, we commenced the Christian Era in the last year or the third millennium, instead of the first of the fourth. This blunder follows us through every year, so that 1878 A. D. is not 5,878 A. M., but 5,877 was the first three months of our 1878 and nine months of our 1879.

To land the Ancient Hebrew, Solar Cycle on our Solar Cycle of 28 years, the following table is constructed:

A. M.	A. D.	A. M.	A. D.	A. M.	A. D.	A. M.	A. D.	A. M.	A. D.	A. M.	A. D.
4002	3	4317	318	4632	633	4947	948	5262	1263	5577	1578
4017	18	4332	333	4647	648	4962	963	5277	1278	5592	1593
4032	33	4347	348	4662	663	4977	978	5292	1293	5607	1608
4047	48	4362	363	4677	678	4992	993	5307	1308	5622	1623
4062	63	4377	378	4692	693	5007	1008	5322	1323	5637	1638
4077	78	4392	393	4707	708	5022	1023	5337	1338	5652	1653
4092	93	4407	408	4722	723	5037	1038	5352	1353	5667	1668
4107	108	4422	423	4737	738	5052	1053	5367	1368	5682	1683
4122	123	4437	438	4752	753	5067	1068	5382	1383	5697	1698
4137	138	4452	453	4767	768	5082	1083	5397	1398	5712	1713
4152	153	4467	468	4782	783	5097	1098	5412	1413	5727	1728
4167	168	4482	483	4797	798	5112	1113	5427	1428	5742	1743
4182	183	4497	498	4812	813	5127	1128	5442	1443	5757	1758
4197	198	4512	513	4827	828	5142	1143	5457	1458	2772	1773
4212	213	4527	528	4842	843	5157	1158	5472	1473	5787	1788
4227	228	4542	543	4857	858	5172	1173	5487	1488	5802	1803
4242	243	4557	558	4872	873	5187	1188	5502	1503	5817	1818
4257	258	4572	573	4887	888	5202	1203	5517	1518	5832	1833
4272	273	4587	588	4902	903	5217	1218	5532	1533	5847	1848
4287	288	4602	603	4917	918	5232	1233	5547	1548	5862	1863
4302	303	4617	618	4932	933	5247	1248	5562	1563	5877	1878

The above A. M. years are a continuation of those annexed to the Hebrew Solar Cycle of 15 years, and began each cycle, being table *a*.

HISTORICAL AND SCIENTIFIC SUMMARY OF ALL PAST YEARS FROM CREATION.

The following is a clear summary of all years since time was instituted at Creation Period down to the end of 5876 A. M., which was September, 1878 A. D.:

		PAST YEARS.
246	Antediluvian Solar Cycles of 7 years each, from year 0 to 1721, inclusive. (See Antediluvian Solar Cycle and following page of first years of each cycle)	1721
152	Ancient Hebrew Solar Cycles of 15 years each, from 1722 to 4001, inclusive. (See Ancient Hebrew Solar Cycle and following page of first years of each cycle.)	2280
125	Ancient Hebrew Solar Cycles of 15 years each, brought forward from 4002 to 5876, inclusive. (First Line of Time, showing Ancient Hebrew Solar Cycle sychronized.)	1875
	Total, end of	5876

The foregoing summary is the production of historical records and dates. A Solar Cycle cannot be broken by jumping off one to another before one is complete, nor can a year be broken. It must, both for the sake of seasons and dates, be completed before another is begun.

The following are the chief reasons why we cannot use the Solar Cycle of twenty-eight years belonging to the Christian Era: In the first place there is no succession, as our year begins with January, the fourth month of the true year [September]. To illustrate this great disadvantage, let it be supposed that a man is measuring a piece of timber, and after marking off several feet he stops and begins somewhere further on. This breach would preclude him from giving the true length of the timber. In the second place, we jumped eleven days in the year 1752, which was making another hole in our cycles of time. And in the third place, we thrice omit a day in every 400 years. With chasms like these, increasing as time goes on, our Solar Cycle is a worthless thing for measurement.

Respecting the astronomical or scientific character of these 5876 years, the reader must refer to eclipses, the Lunar Cycle, the transits of Mercury and the transits of Venus, which produce precisely the same number of years either taken in parts, that is, from period to period, or as a whole.

It is this extreme accuracy and minuteness of detail, obtained by Solar Cycles, that excludes the requirement of *such a crutch as the Julian period.* A good chronologist never requires such a support.

It is a great fact, and ought therefore to be stated, that no dates are scientific, but those found in the Scriptures. They are all a simple succession in the chain of time from the first day, and no man can alter that succession. Every date in the Bible falls upon the proper year of the Solar Cycle, and the

correctness of the year is shown by the fact, that every Antediluvian Solar Cycle must have for its last figures 0, 7, 4, 1, 8, 5, 2, 9, 6, or 3, and every ancient Hebrew Cycle 2 or 7. By observing this, we could see in a moment if any year was erroneously on the Cycle or wrongly dated.

IMPORTANT SUGGESTIONS TO ALL NATIONS.

The perfect succession of years from the point of time when history began shows the preference which must be given to the use of the A. M. years as a true succession of time. For this reason I hope that if the world reaches the conclusion of the present century, men will consider themselves sufficiently advanced in intelligence as to abolish the A. D. year, which is irregular, owing to proceeding from 3996, 4004, and 4000 and that for the purposes of systematizing both history and astronomical science, we shall amend our present humiliating errors.

The subject commends itself to all nations. The present unscientific system is increasing our difficulties as time rolls on, and therefore it is easy to see that there is a time coming when the present mode of observing the years will be altered. I would suggest that when the nineteenth century is completed mankind should take up the correct system and true succession of years by starting what would be Wednesday, Jan. 1st, 1901 A. D., as still 1900 until we reach October, which historically and scientifically is the first month of the true year, Sept. Then on Wednesday, October 1st, start with the year as 5900 A. M., and ever afterwards begin the year with that month If this be done, all eclipses and transits will "strike the years for us like the bell of a parish church clock, and we shall be restored to harmony with the movements of the orbs around us, for which purpose we are told that their motions are designed.

DATES OF THE SABBATH DAYS DURING THE DELUGE, 1656 A. M., OR 2340 B. C.

By J. B. Dimbleby, Lecturer on Bible Chronology, and the discoverer of the form and length of the ancient year; also discover of the Antediluvian and Ancient Hebrew Solar Cycles, and first enumerator of all the eclipses before Christ:

The Lunar year 1656 (the Flood year) began with the third day of the week, Tuesday; hence, the fifth of the month would be the first Sabbath day (Saturday) of that year. To prove this, see first month of "Antediluvian Almanack for 1656" and compare it with the fifth year of the "Solar Cycle of the Antediluvians," which was the Flood year. The dates of this fifth year are the natural succession of seventh days from the first year of the Cycle, in writing out which we unconsciously enumerate nine dates of the Flood derived from the seventh day in the first year, by regularly assigning thirty and twenty-nine days alternately to the months. As the dates all come round again on the same day of the week after seven years, 1656 must be the fifth year of the Cycle, and the fifth day of the month the Sabbath day in a direct line from the first Sabbath in Eden shown in Creation year.

The Solar Period of 365 days from *b* to *i*, see Gen. 7:11, and 8:14, the time Noah was in the Ark.

1st month	5	12	19	26	
2nd "	3	**10***a*	**17***b*	24	
3rd "	2	9	16	23	30
4th "	7	14	21	28	
5th "	6	13	20	27	
6th "	4	11	18	25	
7th "	3	10	**17***c*	24	
8th "	1	8	15	22	**29***d*
9th "	7	14	21	28	
10th "	5	12	19	26	
11th "	4	**11***e*	**18***f*	**25***g*	
12th "	2	9	16	23	

The year ended on the 6th day of the week.

The Lunar Year of 354 days, and distinguished from the *Solar Period* by divisions of months, weeks and days.

Part of Year 1657, Noah's 601st.

1st month	**1***h*	8	15	22	29
2nd "	6	13	20	**27***i*	

The reader will find this table more plain a few pages further on.

REFERENCES:—*a* Genesis 7: 1 with 4; *b* 7: 11; *c* 8: 4; *d* 8: 3 (the 150 days after 40 of rain ending on the 190th day of the Flood, must fall on the Sabbath day, the 29th of the 8th month); *e* 8; 6 (the second 40 days began 8; 5, viz., 221st to 260th day of the Flood, immediately on their expiration the dove was sent out the first day, which unquestionably rose from the Ark on the Sabbath day); *f* 8; 10, the dove sent out the second time; *g* 8; 12, dove sent out the third time; *h* 8: 13, New Year's day (Lunar) and Sabbath day; *i* 8: 14, earth all dried, end of Solar period of 365 days, and Noah leaves the Ark.

The above nine Sabbath days come down in unbroken weeks from the creation of man and the first Sabbath in Eden, the first day of that week being a triple alliance—the Lunar year of 354 days, the Solar period of 365 days, and astronomical Lunar Cycle all starting together 1656 Solar years before the Flood—a splendid and marvelous event and a great scientific fact, verified by all eclipses.

EXAMPLE of the commencement of the Solar year during seven years, after which the years again repeated their dates:

1......In 1652 the Solar period began on 1st day of 1st month.*				
2......In 1653	do.	12th	do.	do.
3......In 1654	do.	24th	do.	do.
4......In 1655	do.	6th day of 2nd		do.
5......In 1656 (Flood)	do.	17th	do.	Gen. 7: 10–13.
6......In 1657	do.	28th	do.	do.
7......In 1658	do.	10th day of 3rd		do.

[**1st month, 15th of September.*]

The intercalary days required to make the Solar period again begin with the Lunar year would be seventy-seven, or eleven weeks introduced at the end of each seventh Lunar year, and without interfering with the regular succession of the Sabbath day. (See Antediluvian Solar Cycle.)

A perfect calendar of the full year (like the form of those

given of our own years in pocket books and sheet almanacs) of any year since Creation, upon which it will be seen that the dates of the Bible fall in their proper places in a line from Eden, and in strict conformity with astronomical data, down to Acts 20: 6, 7, or from thence to the present year, can be had.

The Lunar year is more scientific than the Solar year. It is strictly governed by the motions of the moon, which by revolving round the earth in 29½ days, requires that the months should alternately possess 30 and 29 days to keep up with her 12 monthly revolutions. Counted in this way, it will be seen that the dates above given are 7th days. Thus: 5 and 7 are 12, as shown in the 1st month. As there are 4 left after the 7th day, 26th, 3 more days in the second month must be the next 7th or Sabbath day. At the end of the second month (which has 29 days) there are 5 days left, and therefore, 2 more days in the 3rd month must be Sabbath days again.

[SEE TABLE ON FOLLOWING PAGES.]

THE FLOOD PERIOD—ONE YEAR AND TWO MONTHS—1656–7, A. M.

DAY.	DATE.	MONTH 1.	FLOOD DAY.	DAY.	DATE.	MONTH 2.	FLOOD DAY.	DAY.	DATE.	MONTH 3.	FLOOD DAY.
3	1	[*Oct. 15th*] New (lunar)		5	1	*November.*		6	1	*December.*	14
4	2	Year's Day. The Solar		6	2			7 Sat.	2		15
5	3	year was a period not		7 Sat.	3			1	3		16
6	4	divided into days, and		1	4			2	4		17
7 Sat.	5	would begin this year		2	5			3	5		18
1	6	[a fifth one on the Solar		3	6			4	6		19
2	7	Cycle, as is evident by		4	7			5	7		20
3	8	its dates,] on the 17th		5	8			6	8		21
4	9	of second month—Oc-		6	9			7 Sat.	9		22
5	10	tober.		7 Sat.	10	Prepare to enter the Ark		1	10		23
6	11			1	11	(Gen. 7:1) and end of		2	11		24
7 Sat.	12			2	12	40 days' grace from 1st		3	12		25
1	13			3	13	day of the Lunar year—		4	13		26
2	14			4	14	a sign to Nineveh.		5	14		27
3	15			5	15			6	15		28
4	16			6	16			7 Sat.	16		29
5	17			7 Sat.	17	Storm and rain begin	1	1	17		30
6	18			1	18	(Gen. 7: 10-13) Noah	2	2	18		31
7 Sat.	19			2	19	"shut in." It was the	3	3	19		32
1	20			3	20	beginning of the new	4	4	20		33
2	21			4	21	Solar year, and in the	5	5	21		34
3	22			5	22	midst of all its festivi-	6	6	22		35
4	23			6	23	ties. They were all	7	7 Sat.	23		36
5	24			7 Sat.	24	"eating and drinking."	8	1	24		37
6	25			1	25	(Mat. 24: 38.)	9	2	25		38
7 Sat.	26			2	26	[It seems that here Noah	10	3	26		39
1	27			3	27	enters upon his typical	11	4	27	End of Forty Days' Rain	40
2	28			4	28	rest; all the earth now	12	5	28		41
3	29			5	29	hushed in silence.]	13	6	29		42
4	30	[4 Sabbaths in 1st month.]				[4 Sabbaths in 2d month.]		7 Sat.	30	[5 Sabbaths in 3d month.]	43

THE FLOOD PERIOD—ONE YEAR AND TWO MONTHS—1656–7, A. M.

DAY.	DATE.	MONTH 4.	FLOOD DAY.	DAY.	DATE.	MONTH 5.	FLOOD DAY.	DAY.	DATE.	MONTH 6.	FLOOD DAY.
1	1	*January.*	44	2	1	*February.*	73	4	1	*March.*	103
2	2		45	3	2		74	5	2		104
3	3		46	4	3		75	6	3		105
4	4		47	5	4		76	7 Sat.	4		106
5	5		48	6	5		77	1	5		107
6	6		49	7 Sat.	6		78	2	6		108
7 Sat.	7	This was the eighth	50	1	7		79	3	7		109
1	8	Sabbath and 50th day	51	2	8		80	4	8		110
2	9	of the Flood. Although	52	3	9		81	5	9		111
3	10	the rain had ceased the	53	4	10		82	6	10		112
4	11	waters still continued	54	5	11		83	7 Sat.	11		113
5	12	to prevail as we are told	55	6	12		84	1	12		114
6	13	for a period of one hun-	56	7 Sat.	13		85	2	13		115
7 Sat.	14	dred and fifty days.	57	1	14		86	3	14		116
1	15	The prevalence of the	58	2	15		87	4	15		117
2	16	waters for 150 days, and	59	3	16		88	5	16		118
3	17	their great height, is an	60	4	17		89	6	17		119
4	18	impressive indication of	61	5	18		90	7 Sat.	18		120
5	19	their very voluminous	62	6	19		91	1	19		121
6	20	character.	63	7 Sat.	20		92	2	20		122
7 Sat.	21	[Fifteen cubits *upward*	64	1	21		93	3	21		123
1	22	did the waters prevail,	65	2	22		94	4	22		124
2	23	and the mountains were-	66	3	23		95	5	23		125
3	24	covered.] (Gen. 7 : 20.)	67	4	24		96	6	24		126
4	25		68	5	25		97	7 Sat.	25		127
5	26		69	6	26		98	1	26		128
6	27		70	7 Sat.	27		99	2	27		129
7 Sat.	28		71	1	28		100	3	28		130
1	29		72	2	29		101	4	29		131
		[4 Sabbaths in 4th month.]		3	30	[4 Sabbaths in 5th month.]	102			[4 Sabbaths in 6th month.]	

THE FLOOD PERIOD—ONE YEAR AND TWO MONTHS—1656–7, A. M.

DAY.	DATE.	MONTH 7.	FLOOD DAY.	DAY.	DATE.	MONTH 8.	FLOOD DAY	DAY.	DATE.	MONTH 9.	FLOOD DAY.
5	1	*April.*	132	7 Sat.	1	*May.*	162	1	1	*June.*	191
6	2		133	1	2		163	2	2		192
7 Sat.	3		134	2	3		164	3	3		193
1	4		135	3	4		165	4	4		194
2	5		136	4	5		166	5	5		195
3	6		137	5	6		167	6	6		196
4	7		138	6	7		168	7 Sat.	7		197
5	8		139	7 Sat.	8		169	1	8		198
6	9		140	1	9		170	2	9		199
7 Sat.	10		141	2	10		171	3	10		200
1	11		142	3	11		172	4	11		201
2	12		143	4	12		173	5	12		202
3	13		144	5	13		174	6	13		203
4	14		145	6	14		175	7 Sat.	14		204
5	15		146	7 Sat.	15		176	1	15		205
6	16		147	1	16		177	2	16		206
7 Sat.	17	Ark rested this Sabbath.	148	2	17		178	3	17		207
1	18	"And the Ark rested in	149	3	18		179	4	18		208
2	19	the seventh month, on	150	4	19		180	5	19		209
3	20	the 17th day of the	151	5	20		181	6	20		210
4	21	month, upon the	152	6	21		182	7 Sat.	21		211
5	22	mountains of Ararat."	153	7 Sat.	22		183	1	22		212
6	23	(Gen. 8 : 4.)	154	1	23		184	2	23		213
7 Sat.	24	[Another nail in a sure	155	2	24		185	3	24		214
1	25	place: we are right in	156	3	25		186	4	25		215
2	26	our computation.]	157	4	26		187	5	26		216
3	27		158	5	27		188	6	27		217
4	28		159	6	28		189	7 Sat.	28		218
5	29		160	7 Sat.	29	End of 150 days of preva-	190	1	29		219
6	30	[4 Sabbaths in 7th month.]	161	lence of		waters. (Gen. 7: 24)		2	30	[4 Sabbaths in 9th month.]	220
						[5 Sabbaths in 8th month.]					

THE FLOOD PERIOD—ONE YEAR AND TWO MONTHS—1656–7, A. M.

DAY.	DATE.	MONTH 10.	FLOOD DAY.
3	1	(*July.*) "Tops of moun-	221
4	2	tains seen," Gen. 8:5.	222
5	3	The third 40 days now	223
6	4	began. This is the only	224
7 Sat.	5	date which is not a Sab-	225
1	6	bath day, but had it not	226
2	7	been given we should	227
3	8	have had no real cer-	228
4	9	tainty that the dove	229
5	10	was sent out three con-	230
6	11	secutive Sabbath days.	231
7 Sat.	12	Verse 6th shows that	232
1	13	Noah waited 40 days	233
2	14	before opening the win-	234
3	15	dow to send out the	235
4	16	dove.	236
5	17		237
6	18		238
7 Sat.	19		239
1	20		240
2	21		241
3	22		242
4	23		243
5	24		244
6	25		245
7 Sat.	26		246
1	27		247
2	28		248
3	29		249
		[4 Sabbaths in 10th month.]	

DAY.	DATE.	MONTH 11.	FLOOD DAY
4	1	*August.*	250
5	2		251
6	3		252
7 Sat.	4		253
1	5		254
2	6		255
3	7		256
4	8		257
5	9		258
6	10		259
7 Sat.	11	Dove sent out.	260
1	12	Gen. 8:8 & 6 compared.	261
2	13		262
3	14		263
4	15		264
5	16		265
6	17		266
7 Sat.	18	Dove sent out second	267
1	19	time. Gen. 8:10.	268
2	20		269
3	21		270
4	22		271
5	23		272
6	24		273
7 Sat.	25	Dove sent out the third	274
1	26	time. Gen. 8:12.	275
2	27		276
3	28		277
4	29		278
5	30	[4 Sabbaths in 11th month.]	279

DAY.	DATE.	MONTH 12.	FLOOD DAY.
6	1	*September.*	280
7 Sat.	2		281
1	3		282
2	4		283
3	5		284
4	6		285
5	7		286
6	8		287
7 Sat.	9		288
1	10		289
2	11		290
3	12		291
4	13		292
5	14		293
6	15		294
7 Sat.	16		295
1	17		296
2	18		297
3	19		298
4	20		299
5	21		300
6	22		301
7 Sat.	23		302
1	24		303
2	25		304
3	26		305
4	27		306
5	28		307
6	29		308
		[4 Sabbaths in 12th month.]	

DAY.	DATE.	MONTH 1.	FLOOD DAY.	DAY.	DATE.	MONTH 2.	FLOOD DAY
7 Sat.	1	(*October.*) Covering of	309	2	1	*November.*	339
1	2	the ark removed. New	310	3	2		340
2	3	Year's day, and the	311	4	3		341
3	4	601st of Noah. (Gen.	312	5	4		342
4	5	8: 13.) Face of the	313	6	5		343
5	6	ground was dry.	314	7 Sat.	6		344
6	7		315	1	7		345
7 Sat.	8		316	2	8		346
1	9		317	3	9		347
2	10		318	4	10		348
3	11		319	5	11		349
4	12		320	6	12		350
5	13		321	7 Sat.	13		351
6	14		322	1	14		352
7 Sat.	15		323	2	15		353
1	16		324	3	16		354
2	17		325	4	17		355
3	18		326	5	18		356
4	19		327	6	19		357
5	20		328	7 Sat.	20		358
6	21		329	1	21		359
7 Sat.	22		330	2	22		360
1	23		331	3	23		361
2	24		332	4	24		362
3	25		333	5	25		363
4	26		334	6	26		364
5	27		335	7 Sat.	27	Noah came out of the	365
6	28		336	1	28	ark. All earth dried.	
7 Sat.	29		337	2	29	Gen. 8: 14.	
1	30	[5 Sabbaths in 1st month.]	338			[4 Sabbaths in 2d month.]	

PERIOD OF THE FLOOD CONCLUDED.

It will be seen by the figures on the right that Noah was in the Ark the full Solar period of 365 days, and the incidents of the Flood occurred on nine Sabbath days, the Lunar month having, as now, alternately thirty and twenty-nine days.

It is interesting also to observe that as the dates of the Flood are true Solar time proved by the Lunar Cycle, as those of 1656, the years given us in (Gen. 5:) as the births of the patriarchs, coupled with the 600 years of Noah, amounting also to 656 years, are a marvel record of historical accuracy, and not the "poetry" or the legendary "tales" which some rash and unscientific writers have called them.

As a chronologist, I feel a difficulty in finding words to express my admiration of the original or Antediluvian form of years. A Lunar cannot be played with as we play with our Solar year. It was formed by the phases of the moon, which, like a great clock in the fermament registered, when new, the beginning, and when full, middle of month, and was beyond the reach of human power to alter a moment of time. It was a Divine appointment when time was instituted in Eden, in breaking away from which we have involved ourselves in a host of complications which must ever increase as time goes on. The original, or Antediluvian Solar Cycle of seven simple astronomical years, is another feature of the Lunar year which has the stamp of Divinity. Like the number of the days of the Lunar year, the Solar Cycle contained 354 Sabbath days, and when the intercalary days were added, the Sabbath days were 365, like the number of days in the Solar year. The years of Enoch, 365, seem to proclaim the same grand astronomical facts of which Noah's detention in the Ark was another symbol. As an unalterable period of time, the Lunar year continued in use from Creation to the destruction of Jerusalem, and, indeed, is now observed by the Jews, though they are plainly wrong in the way in which they have twice sought to recover the true computation of years. In fact, as scientific men, we cannot get away from the truths of the first Chapter of Gen. It bears the stamp and superscription of Diety, and as the beginning of time it is a chain which no man can sever without driving the spheres of Heaven out of their courses. As a chronologist and an astronomer, I am obliged to continue the use of the Lunar year. It is simple and makes half its own calculation. All the Sabbath days of this work are the seventh days of the astronomical line from Creation.

The Antediluvian Solar Cycle (showing the dates of all Sabbath days.) The first or Creation year on this Solar scale is year 0, and the second year like the second hour of a clock, is one. We count our age this way as past time, but only the first seven years of this cycle count as six.

ANTEDILUVIAN SOLAR CYCLE, SHOWING DATES OF ALL THE SABBATH DAYS.

	Creation.	2d Year.	3d Year.	4th Year.	5th Year.	6th Year.	7th Year.
1st month	7 14 21 28	3 10 17 24	6 13 20 27	2 9 16 23 30	5 12 19 26	1 8 15 22 29	4 11 18 25
2d "	5 12 19 26	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27	2 9 16 23
3d "	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27	2 9 16 23 30	5 12 19 26	1 8 15 22 29
4th "	2 9 16 23	5 12 19 26	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27
5th "	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27	2 9 16 23 30	5 12 19 26
6th "	6 13 20 27	2 9 16 23	5 12 19 26	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24
7th "	5 12 19 26	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27	2 9 16 23 30
8th "	3 10 17 24	6 13 20 27	2 9 16 23	5 12 19 26	1 8 15 22 29	4 11 18 25	7 14 21 28
9th "	2 9 16 23 30	5 12 19 26	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27
10th "	7 14 21 28	3 10 17 24	6 13 20 27	2 9 16 23	5 12 19 26	1 8 15 22 29	4 11 18 25
11th "	6 13 20 27	2 9 16 23 30	5 12 19 26	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24
12th "	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27	2 9 16 23	5 12 19 26	1 8 15 22 29

The seventh or Sabbath days of the intercalary period would be: 7, 14, 21, 28, 35, 42, 49, 56, 63, 70, 77.

The cycle is proved by the "self-same day" of the week falling 120 years back on the same day the Flood began. See Gen. 7: 13, and compare with Self-Same Day in Ex. 12: 41.

Patriarchs seem to have been the keepers of the calendar, dating their year from New Year's day. See Gen. 8: 13.

The unalterable construction of this Solar Cycle is seen as follows: It is seven Lunar years of 354 days each, or twelve revolutions of the moon. As the moon completes a revolution round the earth in 29½ days, the Ancients alternately used 30 and 29 days for their month in order to keep up with

her movements, and thereby begin each year as well as every month with a new moon. If we therefore commence to put on a piece of paper each seventh day, we shall write all the figures here printed. Thus the fourth seventh, or Sabbath day in the first month, is twenty-eighth. As we have two days to spare, they make the first Sabbath of the second month to fall on the fifth of the month. When we have in this way written seven years we shall find that we can write no more, because the dates come round again. An eighth year would be like the first. This is the meaning of a Solar Cycle. We shall also find that we have unconsciously written nine of the Scriptural days of the Flood, viz., in the fifth year and the first two months of the sixth year. The Flood, we are told in Gen. 5, was 1656 A. M. Let us see if these dates were: If we look at a following page, giving the first year of each Cycle, or seven years, we see that 1652 was the first year; therefore 1653 would be a second, 1654 a third, 1655 a fourth, and 1656 a fifth year. The dates then of the fifth year proved the Flood to have occurred in 1656. Now see Gen. 5:

Seth was	born when	Adam............	was	130	years old.
Enos	do	Seth..............	"	105	"
Cainan	do	Enos..............	"	90	"
Mahaleel	do	Canian............	"	70	"
Jerod	do	Mahaleel.........	"	65	"
Enoch	do	Jerod.............	"	162	"
Methuselah	do	Enoch............	"	65	"
Lamech	do	Methuselah	"	187	"
Noah	do	Lamech...........	"	182	"
Gen. 7:10-13-Flood came when Noah		..	"	600	"
				1656	or 2340 B. C.

We here find that Scripture history and true science agree. But the most grand proof is, all the eclipses we now see necessitate the occurrence of the *Total Eclipse* No. 43, line 12, in

1656 A. M., which again requires No. 1 at Creation. (See Antediluvian Eclipses and list of Astronomical Years.) We can next apply a stern test to prove these years were made up to Solar periods. As the year is eleven days short of the Solar, the seasons would in twenty years be reversed and the dates of the seventh days of the first year get into the second. To prevent this great dilemma, the nations using the Lunar year employed extra days, called "intercalary." Seven times 11 are 77. The Antediluvians could use no less, and further, their dates show that they used them at the end of each seventh year, and thus began anew, their Solar Cycle as at Creation. This would not disturb the regular observance of the seventh, or Sacred Sabbath day, because seventy-seven days are just eleven weeks. Now that they did this is evident from the fact that the 133d Lunar year is the Solar year also.

The moon is also new on the same day after nineteen Solar years. This is known in astronomy as the Metonic or Lunar Cycle, and to apply it we must square seven with nine.

It is certain then that by putting in the extra (intercalary) days at the end of the cycle, the Lunar and Solar years began together; not exactly so, as at the end of two cycles they have put in an extra week, because fifteen years require 171 intercalary days. This is a beautiful scientific test of the precise Solar length of the Antediluvian years, an unquestionable *demonstration* of the true historical character of the book of Genesis, and the Divine origin of time.

[*Illustration.*—A mechanic makes two cog-wheels, and makes the cogs and spaces between the cogs equal, so as to have the one wheel match into the other; he makes one wheel to contain a given number of cogs, say, No. 1, 60; he makes the other No. 2, enough smaller so as to admit of just 59 cogs

and proportionate spaces. He now puts the wheels, or cycles, if you please, together, and chalks a cog and a space that are in mesh and in line with the center of the two wheels. He next commences to give wheel No. 2 revolutions; he turns it once round and finds that it lacks just one cog of matching into the chalked space previously made; but if he continues to revolve the wheel until he has made as many revolutions as there are cogs in the wheel No. 1, he will find his chalk marks match again. So it is with these cycles.]

HOW ANY MAN CAN PROVE THE DATE OF CREATION AND THE FLOOD.

The annexed page (the Antediluvian Solar Cycle) has brought me hundreds of letters of congratulation. It gives, even to a child, the means of proving the historical record of the creation of the present order of things of the world and the year of the Flood. The simple way of doing this is as follows:

First reckon up the years of the world when each of the patriarchs was born, as given us in Gen. 5. The line is consecutive from father to son, and the years are tabulated under the Solar Cycle, where they produce a total of 1656 as the Flood Year.

Look next at the Antediluvian Solar Cycle. It contains seven years and cannot be longer or shorter, because seven years bring round the day of the week upon the same date of the month. This is the meaning of a Solar Cycle or cycle of days produced by the sun. The figures are the dates of the seventh or Sabbath days of each month, and they could never alter. Thus the first month of the first year of each cycle had always its Sabbath days on the 7th, 14th, 21st and 28th of the month. Indeed, every figure of the Solar Cycle is the consecutive date o the seventh day. The years are Lunar and therefore the months have alternately 30 and 29 days. This arrange-

ment is now observed by the Jews, Turks and Chinese, and has the moon new on the first day of each month, because the moon makes its revolution round the earth in 29½ days, so that by borrowing the half-day from every other month the moon was like a great clock in the sky—new at the beginning and full in the middle of the month. A boy when blindfolded and bearing in mind that Lunar months have alternately 30 and 29 days, could repeat all the figures of the Solar Cycle, and he would unconsciously mention nine of the ten dates of the Flood in the fifth year of the cycle and the two first months of the sixth year. This proves that the fifth year was the Flood year.

We have next to see whether this fifth year of the cycle ever became 1656. It did, and the proof is as follows: As the cycle is seven years, 236 cycles are 1652. Therefore, the first year of the cycle would be 1652, and the second 1653, the third 1654, the fourth 1655, and the fifth (the year we are looking for) would be 1656. In this fifth year we have the Flood dates, as shown in a previous page giving the dates of the Deluge.

N. B.—The reason why 1652 was a first year of the cycle and not the last is, Creation year is 0, as is the first of a life.

As we can now precisely determine the accuracy of the year of the Flood, we can with the same astronomical precision find the date or first day of Creation. It is manifest that this was Sunday, the first day of the week, as observed at the present time, the first day of the month, and the first year of the Solar Cycle, or, in other words, 1656 years before the Flood. We cannot have one date without the other. It is the Solar Cycle which gives us the power to determine both, and let it be remembered that the Lunar Cycle is a high scientific way for showing that the Solar Cycle has been carried on correctly.

It is still more satisfactory to know that every day of the

Solar Cycle is required by the Eclipse Cycle, the working of which in its "tell-tale," or progressive character, shows the necessary consecutive years, and like the two transit lines of time, supplies the day of the week which each year has begun. These are all explained.

From the epoch of Creation, to the end of September, 1883, A. D., was 5882 years. As this is a period determined by Five Lines of Astronomical Time, we cannot alter it, without altering the motions and orbits of the planets. *They are a clock whose wheels we cannot reach.* How precise and continuous are its movements.

We must admit that one of the impressive and brilliant features of Creation is the high scientific character of its date. We cannot suppose that the date was given by the writer merely to show that there was such a date. What did the Antediluvians, or Moses who quotes from their records, know about the transits of Mercury? We must accept the date as a reference to an event, in the same way as the birth of a child. The events are stated to be a reconstruction of the face of the world (this is the least construction we can accept) and the introduction of intelligent and moral man, because the same writers who give us the date inform us that before Adam "THERE WAS NOT A MAN TO TILL THE GROUND." Some men say that Adam was the head of a new race. But if the writers of Scripture are so marvelously correct with the dates, ought we not give them credence for the facts which they supply? Besides this, it is evident that the date has been carried on consecutively, and if the events were not correct, it would not be possible to record anything which the early generations of men would know was not true.

Men should be aware of teaching what is speculative, be-

cause experience shows that as true science advances it has often destroyed theory and brought its advocates to shame.

TABLE OF EACH FIRST YEAR OF THE ANTEDILUVIAN SOLAR CYCLE.

The following are 7th years and therefore the first of each successive Cycle of Seven:

*0	259	518	777	1036	1295	1554	1813
7	*266	525	784	1043	1302	1561	1820
14	273	*532	791	1050	1309	1568	1827
21	280	539	*798	1057	1316	1575	1834
28	287	546	805	*1064	1323	1582	1841
35	294	553	812	1071	*1330	1589	1848
42	301	560	819	1078	1337	*1596	1855
49	308	567	826	1085	1344	1603	*1862
56	315	574	833	1092	1351	1610	1869
63	322	581	840	1099	1358	1617	1876
70	329	588	847	1106	1365	1624	1883
77	336	595	854	1113	1372	1631	1890
84	343	602	861	1120	1379	1638	1897
91	350	609	868	1127	1386	1645	1904
98	357	616	875	1134	1393	1652	1911
105	364	623	882	1141	1400	1659	1918
112	371	630	889	1148	1407	1666	1925
119	378	637	896	1155	1414	1673	1932
126	385	644	903	1162	1421	1680	1939
*133	392	651	910	1169	1428	1687	1946
140	*399	658	917	1176	1435	1694	1953
147	406	*665	924	1183	1442	1701	1960
154	413	672	*931	1190	1449	1708	1967
161	420	679	938	*1197	1456	1715	1974
168	427	686	945	1204	*1463	1722	1981
175	434	693	952	1211	1470	*1729	1988
182	441	700	959	1218	1477	1736	*1995
189	448	707	966	1225	1484	1743	2002
196	455	714	973	1232	1491	1750	2009
203	462	721	980	1239	1498	1757	2016
210	469	728	987	1246	1505	1764	2023
217	476	735	994	1253	1512	1771	2030
224	483	742	1001	1260	1519	1778	2037
231	490	749	1008	1267	1526	1785	2044
238	497	756	1015	1274	1533	1792	2051
245	504	763	1022	1281	1540	1799	2058
252	511	770	1029	1288	1547	1806	2065

Each of the years enumerated above began on the first day of the week, *our* Sunday, having *their* first Sabbath on the 7th day, Saturday. They are, therefore, all table 1 of the seven

repeating years or Solar Cycle, showing the dates of the Antediluvian Sabbaths. Those marked thus * also commenced a sevenfold Lunar Cycle—a beautiful scientific proof that the years were made Solar. The Lunar Cycle being a measure of the 19 years, to work it upon a scale of 7 years, it must be used sevenfold—7 times 19 are 133—hence, the expiration of each 133 years, reproducing the dates of Creation week and year, is an unquestionable demonstration that the shorter Lunar years were lengthened to the Solar years by adding extra or intercalary days.

To find 1656, the Flood year, it will seem that 1652 was a first year or on the Solar Cycle, therefore, Table 2 is 1653, Table 3 is 1654, Table 4 is 1655, and Table 5 is 1656.

It will be seen by the annexed table of Sabbaths of every seven years, which form the Solar Cycle or repeating years of the Antediluvians, that they are backed up to the times of Creation, namely, 1656 years before the Flood; that the first Sabbath was the seventh day of the first month of the first year. Hence it is plain that time was instituted in Eden, and that the date of Creation is a historical and scientific fact.

It will be seen by the Solar Cycle on the previous pages that the dates of the Deluge always come round again on the same days of the week when the year was the fifth of the Cycle, or sevenfold series. Taking 1652, which the annexed table of first years supplies, the fifth of the Cycle is 1656, having the same dates for Sabbaths as those printed in black type, with Scriptural references in the explanation of the nine Sabbaths in Noah's diary of the Deluge. How beautiful is this. It proves that the dates of Creation and the Deluge are historical facts, and the *Bible* the *Log Book* of the *World*.

These seven years are not originally written in the simple order as printed. They were worked backwards from the

Flood. Having first found the true form of the Deluge here, the next step was to obtain the Solar Cycle by ascertaining how many years elapsed before the dates repeated themselves on the same Sabbath days. When this was done the years were backed in sevens, and it was found that they exactly took in 1656 years obtained in Gen. 5, and began the first Sabbath in Eden on the 7th day of the first week and first month.

The Lunar Cycle being 19 Solar years (a period of 235 lunations when the moon is again new at the same time and place), we have a beautiful scientific proof that the Antediluvians carefully added the extra intercalary days, otherwise it could not fall on the first year. These are great scientific facts. What Creation was, this work does not undertake to say, but it was the Divine institution of time and the origin of man—Adam's years are the progress of time.

NOTE—The Lunar Cycle being 2 hours and 4 minutes longer than 19 Solar years does not interfere with the computation of years.

The Lunar Cycle.

THE SECOND LINE OF ASTRONOMICAL TIME. HISTORY SYSTEMIZED.

A Lunar Cycle—sometimes called Metonic Cycle in honor of Meton, its discoverer—is a period of 19 tropical years, or 19 years, two hours, four minutes, when the same new moon occurs. Thus, if a man saw the moon new, apparently resting on the top of a distant church spire, and the clock struck nine in the evening, he might see the moon new again 19 years afterwards at four minutes past eleven and in the same position. The period is a measure of time, 325 lunations which will gage All Past Time by measuring it off as a man might measure off a ferkin of wine with a standard pint jug.

Apply this to the Antediluvian Solar Cycle and it will show

that every 133d year was the same as the first year, that is beginning with Sunday and having Saturday on the 7th day of the month.

The process is fully explained in the page Table of First Years of each Antediluvian Solar Cycle, showing that to square 7 with 19 we must take the Solar Cycle sevenfold. Thus 7 times 19 are 133. Every 133d year is in that year marked *, and it falls on a first year. If it fell on any other year it would show that the patriarchs had not kept correct time, or had not properly observed the intercalary days.

METHOD FOR PROVING THE YEAR.

The following is an astronomical method for proving the year of the FLOOD:

7	cyles of	19 years	are 133	A. M.	
14	do	do	266	"	
21	do	do	399	"	
28	do	do	532	"	
35	do	do	665	"	
42	do	do	798	"	
49	do	do	931	"	
56	do	do	1064	"	
63	do	do	1197	"	
70	do	do	1330	"	
77	do	do	1463	"	
84	do	do	1596	"	1596
				1 cycle of 19 years	19
				1 do do	19
				1 do do	19
				Table 2 of Solar Cycle was year......	1653

Hence, table 3 was 1654, table 4 was 1655 and table 5 was 1656, upon which we find the dates of the Flood, in Gen. 7 and 8; and from Chap. 5, we find the Flood year was 1656.

The above is historical time, or years A. M. They would be one less if we start year 0 as 1.

This Lunar Cycle proves all periods of history. It settles the doubts of men respecting the length of the years of the

patriarchs. We find that they were Solar, and that, although the Ancients only divided the Lunar year into weeks and months, yet they observed the annual revolution of the sun as a Solar period, the precise length of which they have known and observed better than we have.

The fifteen years or the Ancient Hebrew Solar Cycle are also proved by the Lunar Cycle, and show us that there has not been a day lost or added improperly since time began. Fifteen times nineteen are 285, therefore every 285th year is the first of the Solar Cycle, having Saturday on the seventh of the month as at Creation. It works in this way down to the present year, giving us a simple and unquestionable proof that the unbroken weeks of seven days have come down to us from Eden. It could not be otherwise with Lunar years which no man can alter if he tried. The Lunar Cycle is the natural production of Lunar time. We cannot fool or muddle about the Lunar year as we have done with the Solar periods. It is the production of the motions of the moon, and being sternly astronomical, we cannot alter it any more than we can the multiplication table. The eclipses and transits would mock us if we touched the Lunar Cycle, the Second Line of Astronomical Time. Alas ! They mock us now because we inherit *Pagan* time. We assign dates to them with which they have no proper concurrence.

Any history to which the Lunar Cycle will not apply must be rejected as spurious. That of Babylon and also that of Assyria are good, and have a close relationship to Scripture; but Chinese history is purely mythological earlier than 1796 A. M. which was soon after the dispersion from Babel.

Neither can any system of chronology be worth attention which is incompatible with this and other systematic scientific measurements. It is supreme folly to put 30 years into a Lunar

Cycle of 19 years, which must be done if the hap-hazzard systems of Hales and Deutch are followed. Of all the old chronologists Usher was the truest. His line of history commences 4004, instead of 3996 B. C., the true year of the Nativity, as chronologists now admit. Allow Usher these eight years and the length of his time is correct, but for want of a scientific system, he could not adjust some of the Biblical dates.

The great advantage of the Lunar Cycle is that it absolutely determines the precise succession of years and days. For instance, the Ancient Hebrew Solar Cycle began with 1722, hence, every 285th year must be the same as the first as to the dates of the Sabbath days. If the historical dates show that this was not so, it would be sure proof of a departure from a true consecutive record. It will also be seen that the first year of the Cycle always alternately ends with 2 or 7. Antediluvian time has this systematic precision by the Lunar Cycle in lengths of 133 years. This is grand work! Instead of doubting we must admire!

It will thus be seen that the Line of Time which I give in this book is one determined by astronomical data, and cannot be controverted. It is indeed supported by five astronomical lines and extends from Adam to the present time. All lines telling the same story. Nothing is left to the individual judgment. It is that known as the Hebrew version; but this is because it is the only one which bears the test of the controlling dates of Astronomical Cycles. As such it must hold its place whatever else may be stated concerning Chinese mythology. It is very remarkable that where reliable Chaldæan, Chinese, or Egyptian history commences, it is close to the period known as the Dispersion. Before this the tradition of these nations states that they were governed by gods, which is a reference to the patriarchs whose long lives and position entitled them to be

regarded as "Sons of God." My close and careful investigations show me that prior to the Dispersion there is no history, monumental or otherwise, except that obtained through the Hebrews. The epoch of Menes, which commenced the dynastics of Egypt, drawn up by Manetho, the priest of Heliopolis, three centuries B. C. began after the Dispersion. Thus we have:

The Scriptural Account, about.............	1770 A. M.
Beginning of Chaldean history.............	1770 "
Chinese history, the Hia...................	1796 "
Egyptian Epoch of Meno....................	1896 "

The Hebrew text gives us no precise dates for the Dispersion, but it is easy to see that it was rather better than a century after the Flood. The Babylonian cuneiform (wedge shape) tablets are copies of records made by the Accadians, who used the cuneiform system of writing and built the great cities of Chaldæa mentioned in Gen. 10:10, as Accad, etc.

I am, therefore, of opinion that as these Chaldæan, Chinese and Egyptian histories commence with the Dispersion, the mythological references are fragmentary allusions to the patriarchal period, which for its great scientific character we are bound to accept. Manetho states that the government of the Egyptians was first by gods; the Chinese state that they were ruled by gods and god descended men, and the system of time they keep is Lunar like that of the Antediluvians, Chaldæans, Ancient Babylonians and Hebrews; and it is also claimed that the great Pyramid of Egypt was built by Cheops, who flourished 120 years after the Dispersion.

THE ANCIENT HEBREW SOLAR CYCLE.

The Solar Cycle of fifteen years appears to have suceeded that of the Antediluvians in the beginning of 1722 A. M., which is 360 years before Abraham's call. It is so perfect that it supplies the days of the week for all the Biblical dates from that

period, and gives the dates of the old Sabbath days (Saturday) up to the present time.

The months have thirty and twenty-nine days alternately. The 13th or intercalary month at the end of each third year, has thirty-four days, except the middle intercalary period, table *i*, which has 35 days. Properly only thirty-three days (3 times 11,) are wanted to make the Lunar year of 354 days equal to the Solar year of 365, but the extra six days are necessary to float the full Lunar year, or motions of the moon, on with the Solar period.

As an astronomical table it is unequalled. Neither the Ancients nor we can alter it. There can be *no other* seventh days (Saturday) than those that are upon it, and this is the reason why it is verified by all the Biblical dates from Abraham.

In using this Solar Cycle for Biblical purposes the seventh month must always be called the first of the year (according to Divine command, Exodus 12:2), from the exodus of the Israelites in the seventh month 2513 A. M., table *l*. Therefore, seventh sacred month is the first civil month, the eighth sacred month is the second civil month, and so on. The intercalary month had no number. There is no Biblical date upon it, although the dates of Scripture run through it with scientific accuracy. As a civil regulation the Jews probably thought it would show a want of obedience to mention an intercalary date, and for this reason also Moses has given us no dates for Scripture history prior to the institution of the sacred order of the months, excepting those of the Flood.

HOW TO FIND THE YEARS.

The year given on the margin of the Bible is found by subtracting the B. C. year from 4004. Thus, 1491 from 4004 is 2513 A. M., the exodus.

The following were first years of this Solar Cycle of the

MO.	*a.*	*b.*	*c.*	*d.*	*e.*
1st	7 14 21 28	3 10 17 24	6 13 20 27	3 10 17 24	6 13 20 27
2d	5 12 19 26	1 8 15 22 29	4 11 18 25	1 8 15 22 29	4 11 18 25
3d	4 11 18 25	7 14 21 28	3 10 17 24	7 14 21 28	3 10 17 24
4th	2 9 16 23	5 12 19 26	1 8 15 22 29	5 12 19 26	1 8 15 22 29
5th	1 8 15 22 29	4 11 18 25	7 14 21 28	4 11 18 25	7 14 21 28
6th	6 13 20 27	2 9 16 23	5 12 19 26	2 9 16 23	5 12 19 26
7th	5 12 19 26	1 8 15 22 29	4 11 18 25	1 8 15 22 29	4 11 18 25
8th	3 10 17 24	6 13 20 27	2 9 16 23	6 13 20 27	2 9 16 23
9th	2 9 16 23 30	5 12 19 26	1 8 15 22 29	5 12 19 26	1 8 15 22 29
10th	7 14 21 28	3 10 17 24	6 13 20 27	3 10 17 24	6 13 20 27
11th	6 13 20 27	2 9 16 23 30	5 12 19 26	2 9 16 23 30	5 12 19 26
12th	4 11 18 25	7 14 21 28	3 10 17 24	7 14 21 28	3 10 17 24
			2 9 16 23 30		

MO.	*f.*	*g.*	*h.*	*i.*	*j.*
1st	2 9 16 23 30	6 13 20 27	2 9 16 23 30	5 12 19 26	1 8 15 22 29
2d	7 14 21 28	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27
3d	6 13 20 27	3 10 17 24	6 13 20 27	2 9 16 23 30	5 12 19 26
4th	4 11 18 25	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24
5th	3 10 17 24	7 14 21 28	3 10 17 24	6 13 20 27	2 9 16 23 30
6th	1 8 15 22 29	5 12 19 26	1 8 15 22 29	4 11 18 25	7 14 21 28
7th	7 14 21 28	4 11 18 25	7 14 21 28	3 10 17 24	6 13 20 27
8th	5 12 19 26	2 9 16 23	5 12 19 26	1 8 15 22 29	4 11 18 25
9th	4 11 18 25	1 8 15 22 29	4 11 18 25	7 14 21 28	3 10 17 24
10th	2 9 16 23	6 13 20 27	2 9 16 23	5 12 19 26	1 8 15 22 29
11th	1 8 15 22 29	5 12 19 26	1 8 15 22 29	4 11 18 25	7 14 21 28
12th	6 13 20 27	3 10 17 24	6 13 20 27	2 9 16 23	5 12 19 26
	5 12 19 26 33			1 8 15 22 29	

MO.	*k.*	*l.*	*m.*	*n.*	*o.*
1st	4 11 18 25	7 14 21 28	4 11 18 25	7 14 21 28	3 10 17 24
2d	2 9 16 23	5 12 19 26	2 9 16 23	5 12 19 26	1 8 15 22 29
3d	1 8 15 22 29	4 11 18 25	1 8 15 22 29	4 11 18 25	7 14 21 28
4th	6 13 20 27	2 9 16 23	6 13 20 27	2 9 16 23	5 12 19 26
5th	5 12 19 26	1 8 15 22 29	5 12 19 26	1 8 15 22 29	4 11 18 25
6th	3 10 17 24	6 13 20 27	3 10 17 24	6 13 20 27	2 9 16 23
7th	2 9 16 23 30	5 12 19 26	2 9 16 23 30	5 12 19 26	1 8 15 22 29
8th	7 14 21 28	3 10 17 24	7 14 21 28	3 10 17 24	6 13 20 27
9th	6 13 20 27	2 9 16 23 30	6 13 20 27	2 9 16 23 30	5 12 19 26
10th	4 11 18 25	7 14 21 28	4 11 18 25	7 14 21 28	3 10 17 24
11th	3 10 17 24	6 13 20 27	3 10 17 24	6 13 20 27	2 9 16 23 30
12th	1 8 15 22 29	4 11 18 25	1 8 15 22 29	4 11 18 25	7 14 21 28
		3 10 17 24 31			6 13 20 27 34

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Ancient Hebrew, that is table *a*. By knowing this, any intervening year is found. If, therefore, any year wanted is not in the list, take the nearest preceding one. For example, the Israelites marched out of Egypt in the seventh civil month of 2513; as the nearest preceding year in the list is 2502, and, of course, the first on the Cycle, we must count forward upon it until we arrive at 2513, which is table *l*.

*1722	2067	2412	2757	3102	3447	3792
1737	2082	2427	2772	3117	3462	3807
1752	2097	2442	2787	3132	3477	3822
1767	2112	2457	2802	*3147	3492	3837
1782	2127	2472	2817	3162	3507	3852
1797	2142	2487	2832	3177	3522	3867
1812	2157	2507	2847	3192	3537	3882
1827	2172	2517	*2862	3207	3552	3897
1842	2187	2532	2877	3222	3567	3912
1857	2202	2547	2892	3237	3582	3927
1872	2217	2562	2907	3252	3597	3942
1887	2232	*2577	2922	3267	3612	3957
1902	2247	2592	2937	3282	3627	3972
1917	2262	2607	2952	3297	3642	3987
1932	2277	2652	2967	3312	3657	*4002
1947	*2292	2637	2982	3327	3672	4017
1962	2307	2652	2997	3342	3687	4032
1977	2322	2667	3012	3357	3702	4047
1992	2337	2682	3027	3372	*3717	4062
*2007	2352	2697	3042	3387	3732	4077
2022	2367	2712	3057	3402	3747	4092
2037	2382	2727	3072	3417	3762	4107
2052	2397	2742	3087	*3432	3777	4122

Our 1879 A. D. began on table *a*, sixth of fourth month 5877. The Solar Cycle and eclipses prove us ONE YEAR, NINE MONTHS TOO FAST.

The first seventh day of all these years was the Sabbath, and as 1722 would have been the first year of the Antediluvian Solar Cycle it is a continuation of the seventh day from Eden. THE WEEK HAS NEVER BEEN BROKEN. The dates of all Scripture history show this. It is also proved by the Lunar Cycle of 285 years marked * Fifteen times nineteen are 285. Hence, if we add 285 to the first line *1722 we will have 2007 and so on.

The years of the patriarchs from Noah to Abraham, like those from Adam to Noah are an accurate and most splendid record of Solar years. This is easily proved by noticing that the lines of the eclipses they requier are not broken by them. In this way science verifies each year.

The way by which we obtain the year 2082, when Abraham left Ur (a first year of this Cycle), is:

Gen.	7:11	Noah was 600 years at Flood.........			1656	A. M.
"	11:10	Araphaxad born after that		"	2	years.
"	12	Salah born when Arphaxad was.........			35	"
"	14	Eber	"	Salah "	30	"
"	16	Peleg	"	Eber "	34	"
"	18	Reu	"	Peleg "	30	"
"	20	Serug	"	Reu "	32	"
"	22	Nahor	"	Serug "	30	"
"	24	Terah	"	Nahor "	29	"
"	32	Terah died when he was }			205	
"	12:4	Abraham was then 75 }				
					2083*	

* Terah left the city of Ur with Abraham on the fifteenth of the seventh month, 2032, table *a*, and died in Haran, 3083. Gen. 11:31.

HOW THE SOLAR CYCLE IS PROVED.

1. It is astronomical, being the movement of the moon. 2. It is perpetual and as true to-day as it was 4000 years ago at Herber's birth. 3. The 15 Songs of Degrees (Psalms 120:–134) represent the 15 years of the Solar Cycle. 5. A Solar Cycle of 15 years, but no other, will produce the Biblical dates and periods.

SELF-SAME DAYS.

Table *a* was 2082, when Abraham left Ur, and table *l* was 2513, when the exodus took place. The 7th months are alike in their dates of Sabbath days, therefore, the 15th of both would produce *"self-same day"* of the week (Tuesday) and date of the month. We read in Numbers 33:3 that the Israelites left Egypt on the 15th of the first sacred month (7th civil) thus

showing in Exod. 12: 41, what Moses meant by "the end of the 430 years" falling on a self-same day.

Another self-same day is found in Ezek. 40: 1. In Chap. 33: 21, the Prophet says the city was smitten in the 12th year of the captivity, on the 5th day (Saturday) of the 10th month. The first six months of the captivity years fell on the one civil year, and the last six on the next one, as shown on the list of Captivity years; hence the 10th sacred (4th civil) month fell upon table *l*, which was 3418 A. M. Turning next to Chap. 11: 1, we read that in the 25th year of the Captivity "in the beginning of the year" that is 3431, on the 10th day of the month (first civil) "in the 14th year after the city was smitten" the hand of the Lord was upon me. This was Saturday again, table *o*. Both were Sabbath days and scientific.

"In the 3d (9th civil) month," Exod. 19: 1, table *l*, the Israelites entered the Wilderness of Sinai on the same day, that is first of the month, hence, the "third day," when the law was given was Tuesday, the 3d day of the week. It was also the 5th day (Pentecost) after the Passover in Egypt. Pentecost means 50th.

Our Lord was born on the end of the 3d month, 2996, table *j*, answering to our December.

The common Christian Era began with the 4th month of 4000, table *n*, which was year 1 A. D. It ought to have started with 4001, then 4002 would have been our 2, and so on. Owing to this blunder our years are 1 before A. M.

The Crucifixion was Friday, 15th of 7th civil (first sacred) month, table *m*, 4029, or 30 A. D. The Passover was eaten on Thursday evening, 14th. The 16th was Saturday, the Sabbath, and the 17th (Sunday) was Resurrection day.

The rich cluster of dates beginning Acts 20:6 are 4058, or 59 A. D., table *l*. See Paul's Journey.

Table *k*, 2nd of 7th civil month (first sacred) is the date of Luke 6: 1, and should have been translated "2nd of first month."

CHAPTER VII.

The Death of Abel at the End of Intercalary Days.

THE Bible being the oldest writings in the world, we must use it to verify all the years since time was instituted. The date given in the Scriptures for the death of Abel is an interesting confirmation of the eleven weeks of SEVENTY-SEVEN INTERCALARY or extra days used by the Antediluvians at the end of each seventh year for making the Lunar and Solar year again start together on the same day. We find the date of Abel's death in the following simple way: The margin reading of Gen. 4: 3 reads "And at the end of days" it came to pass, etc. The real literal Hebrew is "And it was at the end of days." The meaning of this peculiar phrase is plain. It refers to the days at the end of the Solar Cycle of seven years. To prove this we may turn to 1 Kings 17: 7, where we have the same Hebrew expression in the margin used in connection with a year (3095) which had intercalary days, though they were in Elijah's time, less in number, as will afterwards be explained in reference to table *i*, (See Ancient Hebrew Solar Cycle); and it is worthy of notice that these intercalary days are on two or three other occasions, when the year of the Hebrews fell on table *i*, associated with sheep shearing and feasting. The churlish Nabal got drunk at this "feast of ingathering" of the fruits when he also sheared his sheep at the end of the days in the year 2945 (See 1st Sam. 25: 36, and also compare 2 Sam. 13: 23). There seems abundant evidence that there was a great similarity between the Patriarchal and Hebrew customs. But beyond this fact, we may further observe that the fruits of the earth at none of the end of the Lunar years assigned by chronologists as the period when Cain slew Abel could be ripe,

seeing that the Solar year was getting from two to three months late. We see, then, that these intercalary days falling next in precedence to the birth of Seth in the year 130, were those at the end of the year 125. The date of the sad catastrophe would be in "the end of the days," probably the seventy-seventh—a great Sabbath day—["And that Sabbath was an high day,"] actually ending the Solar year, but before the sun was down, the earth was reddened with Abel's blood.

The most interesting chronological point is the proof of the seventy-seven intercalary days and I think that Lamech's words associated with Cain's great crime in the end of these seventy-seven days have some historical connection with that, seeing that he expresses their number in a proverbial sense—"seventy and seven fold." Gen. 4: 24.

[Cain and Abel represented two classes that will exist in the world till the close of the present dispensation of time. One class avail themselves of the appointed sacrifice for sin; the other venture to depend upon their own merits; theirs is a sacrifice without the virtue of Divine mediation, and thus it is not able to bring man into favor with God. It is only through the merits of Jesus that our transgressions can be pardoned. Those who feel no need of the blood of Christ, who feel that without Divine grace they can by their own works secure the approval of God, are making the same mistake as did Cain. If they do not accept the cleansing blood they are under condemnation. There is no other provision made whereby they can be released from the thralldom of sin. No substitute will answer the Divine plan and appointment. "Without the shedding of blood there is no remission of sins."]

REMARKS CONCERNING YEARS.

I use the chronology of our English Bible in this work, that is, what is known as "The Hebrew text." The "Samari-

tan" and "Septuagint" are not astronomical, and therefore not worth a straw. Hales greatly erred by using them. This is a very important statement, but no more than 365 days can be put into a year, or more than seven, fifteen, or twenty-three years in a Solar Cycle, and nineteen years in a Lunar Cycle. These are stern astronomical facts which no man can alter, and all the dates of the Bible work upon them, preserving in the whole narratives the character of the Seventh Day.

HOW TO FIND ANY YEAR ON THE SOLAR CYCLES.

In the present edition of the Bible (King James', 1879) the B. C. year given in the margin of the Old Testament is on the supposition that our Lord was born in the 4004 A. M., therefore, to find the year of the world that year must be used instead of 3996, which all chronologists now admit to be the correct one.

Example—To obtain the year of the departure of the Israelites from Egypt, the margin of the Bible at Exodus 12: gives 1491. Subtract this from............... 4004
1491

This is the Exodus year admitted by commentators 2513 A. M.

To find this 2513 on the Ancient Hebrew Solar Cycle, look at the list of the first years (that is those which always were table *a*) of the cycle. It will be seen that the nearest preceding year is 2502, which commenced the second. Now count forward and 2513 will be table *l*. All the dates in the Bible are found in this way, except a few marginal inaccuracies, which let us hope the revisers will rectify.

In noticing the dates in the Bible, the reader must bear in mind, what is stated more than once in this work, that the months are always used by the Hebrews in their sacred order. The seventh month being that in which the Israelites left

Eygpt, it begins the sacred year and is called the first month. By this way, the twelfth civil is sixth sacred, and the first civil the seventh sacred month. Example: Daniel's vision, recorded in chapter 10:4, table *i* the twenty-fourth of the first month (Sabbath day) being the seventh proper or civil month of the year.

For the New Testament dates, the Crucifixion was table *m*, which is 4029 A. M., or 30 A. D. Our Lord was crucified on Friday, fifteenth of first sacred or seventh civil month. His body was in the tomb on the sixteenth (Sabbath day) and the seventeenth, Sunday, was the Resurrection day.

SUN STANDS STILL.

Herodotus tells us that the priests of Egypt showed him a record of a long day. This was probably the day in which the sun "stood still" in Joshua's time. We have another record of the same singular phenomenon found in the Chinese writings, which say that in the reign of Yeo, the sun did not set for the space of ten days (probably ten hours as then understood). At all events the reign of Yeo was contemporary with the period when Joshua flourished. We therefore seem to have three records of this event first mentioned in Joshua 10:13. A chronologist hopes that the same event which we read as "written in the Book of Jasher" will be found, and thus become a fourth, which it really is, because Jasher did not write the Book of Joshua. Some, however, did not regard Jasher as a man, but a collection of general and historical events referred to by the Seventy translators in the time of Ptolemy Philadelphus.

THE SABBATH DAY NOT OF HEBREW ORIGIN.

As all the Antediluvian dates and also those during the time of the postdiluvian patriarchs form into Solar Cycles, we have uncontrovertible evidence that weeks of Seven days were observed from the First Seventh day mentioned in Genesis 2.

Every man acquainted with scientific chronology knows that there is no Solar Cycle without weeks, and this is why our own dates come round again by bringing the same day of the week upon the same date of the month as at a known previous period, viz., after 28 years. That is to say, as Sunday was the 5th of January in 1868, it must of necessity fall on the same date in 1896. See the Solar Cycle of the Christian Era. This fact would occur every seven years did we not break the chain of dates every fourth year by having a leap year, which lengthens our Solar Cycle to four times seven. Now let the reader look at the Antediluvian Solar Cycle, where he will find the 17th day of the second month falls on the 7th day, Saturday, in the fifth year of that cycle. This, we are told in Gen. 7: 11, was the date of the Flood, and by comparing the first of the patriarchs given in Gen. 5 (see the table given in the page of the cycle in question), we learn that the year was 1656. Let the reader work out the cycle by sevens and he will find that the year No. 5 containing the Flood dates was 1656, hence we see that weeks of Seven days have been observed by the Antediluvians from the first Sabbath of year 0 to 1656. The table of first years of cycle given on a following page will help him to prove this, otherwise it is easily done by dividing 1656 by 7, and, of course, allowing the first year to be 0, as when we reckon the first of our life. This, however, is but one method of proving the observance of weeks of seven days by the Antediluvians. The application of the Lunar Cycle is a most powerful scientific test and is a triumphant proof of the same fact. The eclipse line of time is the third and the two transit lines of Mercury and Venus are others, so that he who says the Sabbath is of Hebrew origin is a very ignorant man. In like manner the emphatic expression of Moses in Exodus 12: 41, relative to the end of 430 years, could not fall on the same

day of the week and date of the month before the delivery of the Sabbath law without a continued observance of weeks of Seven days. Indeed, we have undeniable evidence that the Seventh day has never ceased to be observed. Great scientific facts show us that the Sabbath was kept 2,513 years before the Law was delivered from Mt. Sinai, 1,516 years by the Jews, from thence the Resurrection of Christ in 4029, and 1,553 years in the Christian Era up to 1883, when these lines were written. The three periods may be represented thus:

Before the law on Sinai	2,513	years
By Hebrews..	1,516	"
By Christians..	1,853	"
To the time of this writing........................	5,882	"

[The Sabbath has thus been erroneously looked upon as Jewish, but it was observed by the Jews the shortest period of time.]

CHAPTER VIII.

The Literal Week.

AFTER what Mr. Dimbleby has said as a chronologist, astronomer, a profound scholar, and a genuine scientist, let us look back again at the *Word* and consider the first interrogation—(?) on the title of this book. Having done this we will interrogate the *Word:* For what purpose did God make the Heavenly Orbs? "And God made two great lights; the greater light to rule the day, and the lesser light to rule the night; He made the stars also." (Gen. 1:16.) Did God make these luminaries for a specific and subservient purpose to man? "And God said, 'Let there be lights in the firmament of the heaven *to divide the day from the night;* and let them be for *signs,* and for *seasons,* and for *days* and *years.*'" Gen. 1: 14.

We know nothing in regard to Mr. Dimbleby's religious views farther than his writings in this work on "All Past Time," which in the close of his work, or last article in this book which proves him *not* an *observer* of the *Seventh Day.* We cannot but admire the writer for his untiring persuance in the Periodical Cycles of the "Firmamental" Orbs, which the Psalmist says, "Declare the glory of God." Psa. 19: 1.

Before leaving this branch of the subject let us listen to another eminent writer on the subject of the *Literal Week:* "Like the First and the Seventh day, the week originated at Creation, and it has been preserved and brought down to us through Bible history. God himself measured off the first week as a sample for successive weeks to the close of time. Like every other week, it consisted of seven literal days. Six days

were employed in the work of Creation; upon the seventh, God rested, and He then blessed this day and set it apart as a day of rest for man. [This is no *Creed* but *Bible.*]

"In the law given from Sinai, God recognized the week, and the facts upon which it is based. After giving the command, 'REMEMBER [*Something previously given then,*] the Sabbath day to keep it holy,' and specifying what shall be done on the six days and what shall not be done on the seventh. He states the reason for thus observing the week by pointing back to His own example—'For in six days the Lord made heaven and earth, the sea, and all that in them is, and rested the seventh day; wherefore the Lord blessed the seventh day, and hallowed it.' (Ex. 20:8-11.) This reason appears beautiful and forcible when we understand the days of Creation to be literal. The first six days of each week are given to man for labor, because God employed the same period of the first week in the work of creation. On the [*each consecutive*] seventh day man is to refrain from labor in commemoration of the Creator's rest.

"But the assumption that the events of the first week required thousands upon thousands of years, strikes directly at the foundation of the fourth commandment. [It matters not to the great adversary what is taught, so he can bring God's Word in disrepute and doubt.] It represents the Creator as commanding men to observe the week of literal days in commemoration of *vast,* indefinite periods. This is unlike His method of dealing with His creatures. It makes indefinite and obscure that which He has made very plain. It is infidelity in its most insidious and hence most dangerous form; its real character is so disguised that it is held and taught by many who *profess* to believe the Bible.

"'By the Word of the Lord were the heavens made, and all the host of them by the breath of His mouth.' 'For He

spake and it was done; He commanded and it stood fast.' (Ps. 33:69.) The Bible recognizes no long ages in which the earth was slowly evolved from chaos. Of each successive day of Creation, the sacred record declares that it consisted of an evening and a morning, like all other days that have followed. At the close of each day is given the result of the Creator's work. The statement is made at the close of the first week's record, '*these* are the generations of the heavens and the earth when they were created.' (Gen. 2:4.) But this does not contain the idea that the days of Creation were other than literal twenty-four hour days. Each day was called a generation, because that in it God generated, or produced, some new portion of his work.

"Geologists claim to find evidence from the earth itself that it is very much older than the Mosaic record teaches. Bones of men and animals, as well as instruments of warfare, petrified trees, etc., much larger than any that now exist, or that have existed for thousands of years, have been discovered, and from this it is inferred, that the earth was populated long before the time brought to view in the record of Creation, and by a race of beings vastly superior in size to any men now living. Such reasoning has led many professed Bible believers to adopt the position that the days of Creation were vast, indefinite periods.

"But apart from Bible history, geology can prove nothing. Those who reason so confidently upon its discoveries, have no adequate conception of the size of men, animals and trees before the Flood, or of the great changes which then took place. Relics found in the earth do give evidence of conditions differing in many respects from the present; but the time when these conditions existed, can be learned only from the Inspired

Record. In the history of the Flood, inspiration has explained that which geology could never fathom.

"In the days of Noah, men, animals and trees, many times larger than now exist, were buried, and thus preserved, as evidence to later generations that the Antediluvians perished by a flood. God designed that the discovery of these things should establish faith in Inspired history; but men with their vain reasoning, fall into the same error of reasoning as did the people before the Flood; the things which God gave them as a benefit they turn into a curse by making a wrong use of them.

"There is a constant effort made [by the adversary of all truth] to explain the work of Creation as the result of natural causes; and human reasoning is accepted even by professed Christians, in opposition to plain Scripture facts. There are many who oppose the investigation of the prophecies, especially those of Daniel and the Revelation, declaring them to be so obscure that we cannot understand them; yet these very persons eagerly receive the suppositions of geologists, in contradistinction to the Mosaic record. But if that which God has revealed is so difficult to understand, how inconsistant it is to accept mere suppositions in regard to that which he has not revealed!

"'The secret things belong unto the Lord our God; but those things which are revealed, belong unto us and our children forever.' Deut. 29: 29. Just how God accomplished the work of creation He has never revealed to men. Human science cannot search out the secrets of the Most High. His creative power is as incomprehensible as His existence.

"God has permitted a flood of light to be poured on the world, in both *science* and *art*; but when professedly scientific men treat upon these subjects from a merely human standpoint of view, they will assuredly come to wrong conclusions. It

may be innocent to speculate beyond what God's Word has revealed, if our theories do not contradict facts found in the Scriptures; but those who leave the Word of God and seek to account for His created works on scientific principles, are drifting, without chart or compass, upon an unknown ocean. The greatest minds, if *not* guided by the Word of God in their research, become bewildered in their attempts to trace the relations of science and revelation. Because the Creator and His works are so far beyond their comprehension that they are unable to explain them by natural laws, they regard Bible history as unreliable. Those who doubt the reliability of the records of the Old and New Testaments, will be led to go a step further and doubt the existence of the true God; and then, having lost their anchor, they are left to beat about upon the rocks of infidelity.

"There should be settled belief in the Divine authority of God's holy Word. The Bible is not to be tested by men's ideas of science. Human knowledge is an unreliable guide. Skeptics who read the Bible for the sake of caviling, may through an imperfect comprehension of either science or revelation, claim to find contradictions between them; but rightly understood, they are in perfect harmony. Moses wrote under the guidance of the Spirit of God; and a correct theory of geology will never claim discoveries that cannot be reconciled with his statements. All truth, whether in nature or revelation, is consistent with itself in all manifestations.

"In the Word of God many queries are raised that the most profound scholars can never answer. Attention is called to these subjects to show us how much there is, even among the common things of life, that finite minds, with all their boasted wisdom, can never fully understand.

"Yet men of science think that they can comprehend the

wisdom of God—that which He has done or can do. The idea largely prevails that He is restricted by His own laws. Men either deny or ignore His existence or think to explain everything, even the operation of His spirit upon the human heart, and they no longer reverence His name or fear His power. They do not believe in the supernatural, not understanding God's laws or His infinite power to work His will through them. As commonly used, the term 'laws of nature' comprises what men have been able to discover with regard to laws that govern the physical world; but how limited is their knowledge and how vast the field in which the Creator can work in harmony with His own laws, and yet wholly beyond the comprehension of finite beings!

"Many teach that matter possesses vital power—that certain properties are imparted to matter and it is then left to act through its own inherent energy, and that the operations of nature are conducted in harmony with fixed laws with which God himself cannot interfere. This is false science and is not sustained by the Word of God. Nature is the *servant* of her Creator. God does not *annul* His laws, nor work contrary to them; but He is continually using them as His instruments. Nature testifies of an intelligence, a presence, an active energy, that works in and through her laws. There is in Nature the continual working of the Father and the Son. Christ says: 'My Father worketh hitherto, and I work.' John 5: 17.

"The Levites, in their hymn recorded by Nehemiah, sung 'thou, even thou, art Lord alone; thou hast made Heaven, the heaven of Heavens, with all their hosts, the earth, and all things therein .... and thou *preservest* them all.' (Neh. 9:6.) As regards this world, God's work of creation is completed, for 'the works were finished from the foundation of the world.' (Heb. 4:3.) But His energy is still exerted in uphold-

ing the objects of His creation. It is not because the mechanism that has once been set in motion continues to act by its own inherent energy, that the pulse beats, and breath follows breath; but every breath, and every pulsation of the heart is an evidence of the all-pervading power, of Him in 'whom we live, and move, and have our being.' (Acts 17:28.) The hand of God guides the planets, and keeps them in their position and orderly march through the heavens. He 'bringeth out their host by number; He calleth them all by names by the greatness of His might, for that He is strong in power; not one faileth.' (Isa. 40:26.) God is the true foundation of everything. All true science is in harmony with His works; all true education leads to obedience to His government. Science opens new wonders to our view; she soars high, and explores new depths, but she brings nothing from her research that conflicts with Divine revelation. Ignorance may seek to support false views of God by appeals to science, but the book of nature and the written Word shed light upon each other. We are thus led to adore the Creator, and to have an intelligent trust in His Word.

"No finite mind can fully comprehend the existence, the power, the wisdom, or the works of the Infinite One. Says the sacred writer: 'Cans't thou by searching find out God? Cans't thou find out the Almighty to perfection? It is as high as Heaven; what cans't thou do? It is as deep as Hell; what cans't thou know? The measure thereof is longer than the earth, and broader than the sea.' (John 11: 7-9.) The mightiest intellect of earth cannot comprehend God. Men may be ever searching, ever learning, and still there is an infinity beyond.

"Yet the works of creation testify of God's power and greatness. 'The heavens declare the glory of God; and the firmament showeth His handiwork.' (Ps. 19: 1.) Those

who take the written Word as their counsellor will find in science an aid to understand God. 'The invisible things of Him from the creation of the world are clearly seen, being understood by the things that are made, even His eternal power and Godhead.' (Rom. 1: 20.)" Patriarchs and Prophets, pages 113-118.

THOUGHTS ON THE ABOVE.—THE EDEN ABOVE VS. BELOW.

When in Eden, the Literal Week we find,
God's creative act will come to mind;
God in the hearts of man, again adored,
Eden, anew, to man restored.

O, Eden's beauty!—in days of yore foretold;
Thy city, Jerusalem, when shall we see,
Or walk thy fair streets of gold,
At Eden's fountain drink, and eat of life's fair tree?

"Blessed are they that do His commands, ... (Rev. 22: 14.)
For on either side, life's river stands, ... (Rev. 22: 2.)
The tree of life, *twelve manner* of fruit to bear, ... (Rev. 22: 2.)
And the light of God and the Lamb, forever there." (Rev. 22: 5.)

"I, Jesus, have sent mine Angel to (Rev. 22: 16.)
Say unto the 'Churches' what they should do." (Rev. 22: 16.)
"I, John, saw these things; though sundered far, (Rev. 22: 1-8.)
And heard the voice—'I am..the bright and morning star."' (Rev.22:16.)

'Tis now, "The spirit and the bride say"—View; (Rev. 22: 17.)
Twelve gates of pearl to enter through. (Rev. 21: 21.)
The spirit and the bride doth say:—" Whosoever
Will sup with me, my presence ne'er shall sever." (Rev. 21: 3; 22: 5.)

O, then to this Eden above let us go;
No sickness, no sorrow, the place shall know. (Isa. 33: 24.)
That Eden above, *restored to earth again*, (Acts 3: 21.)
The home of our Saviour and His children. Amen! (John 14. 3.)

CHAPTER IX.

March of the Children of Israel from Egypt.

THERE are a *few*, to say the very least, immovable monumental facts as irresistable to chronological astronomers as the rock of Gibraltar to a row-boat, respecting the long lives of the Antediluvian patriarchs, unless the alloted periods of time be allowed for their lives as stated in the Mosaic or Hebrew chronology in the Book of Genesis. The Flood could not have occurred in A. M. 1656, as given by Usher in Gen. 6. The sun and the moon had the same orbits in Ezekiel's, Daniel's, Isaiah's and Noah's time that they do now, and they occupied the same relation as to their governing *times* and *seasons*. We have seen that the ancient records of eclipses do fall on the same *corresponding dates* as anciently. Mr. Dimbleby is not alone in his computations. To doubt the accuracy of these Chronological Cycles or reoccurances may be possible; yet, when it is done it certainly reveals the depth of intellect and comprehension possessed by the doubter. Men may place their own definition on the incidents recorded, bnt they must allow the *Time claimed* by *Biblical history*, to wit, 3996 Solar years before the birth of Christ. "It is hard to kick against the goads." It is also hard to doubt the *events* which are as infallible as the rising and setting suns. No intelligent investigator can conscientiously do so. See table on next page.

RETURN TO DIMBLEBY.

* There are three very important dates on the fifteenth of this month, viz,, the departure of Abraham from the city of Ur in 2082, the march out of Egypt by the Israelites in 2513, and the crucifixtion of Jesus Christ in 4029. The first one is

MARCH OF CHILDREN OF ISRAEL FROM EGYPT—DATE OF DELIVERY OF LAW, ETC.

Year 2513 A. M., Table l, the 12th of the Ancient Solar Cycle, 1483 B. C.

FIRST SACRED OR SEVENTH CIVIL MONTH.			SECOND SACRED OR EIGHTH CIVIL MONTH.			THIRD SACRED OR NINTH CIVIL MONTH.		
1	Tu	(*March.*) Exodus 12:2. This	1	Th	(*April.*)	1	F	(*May.*) Wilderness of Sinai.
2	W	ordered to be the 1st month	2	F		2	**S**	Ex. 19: 1.
3	Th	of the sacred year.	3	**S**		3	S	"To-day and to-morrow."
4	F		4	S		4	M	Ex. 19: 10.
5	**S**		5	M		5	Tu	Delivery of THE LAW on "the
6	S		6	Tu		6	W	third day" of the week, be-
7	M		7	W		7	Th	ing the 50th, or Pentecost,
8	Tu		8	Th		8	F	after the Passover. Verse 11.
9	W		9	F		9	**S**	
10	Th	Lamb provided. Exod. 12: 2.	10	**S**		10	S	
11	F		11	S		11	M	Moses went up into the mount
12	**S**		12	M		12	Tu	and began the forty days
13	S		13	Tu		13	W	and forty nights, which
14	M	Passover evening, 18, 19.	14	W		14	Th	ended on the 20th of the
15	Tu	The march out of Egypt. See	15	Th	Wilderness of Sin. Ex. 21:1.	15	F	next month, Friday.
16	W	Numbers 33: 3.*	16	F	"Murmured."	16	**S**	Verse 16.
17	Th		17	**S**	Quails at even. 16: 13.	17	S	
18	F		18	S	Manna in morning. 15.	18	M	
19	**S**		19	M	Some stale manna. 20.	19	Tu	
20	S		20	Tu		20	W	
21	M		21	W		21	Th	
22	Tu		22	Th		22	F	
23	W		23	F	"Sixth day" of week. 16: 22-3.	23	**S**	
24	Th		24	**S**	"Seventh day." 16: 27.	24	S	
25	F		25	S		25	M	
26	**S**		26	M		26	Tu	
27	S		27	Tu		27	W	
28	M		28	W		28	Th	
29	Tu		29	Th		29	F	
30	W					30	**S**	

obtained by it being "the self-same day" of the week and date of the month as the date of the Exodus which formed the "end of the 430 years" mentioned in Ex. 12:41 and 51. The three dates are respectively on tables *a, l,* and *m* on the Solar Cycle.

It is interesting also to notice that the journey of St. Paul in 4058, from Greece through Macedonia to Palestine, occurred on this same twelfth year and third month of the Cycle, the numerous dates of which, as recorded by St. Luke, commencing Acts 20, are conclusive proof of the unalterable character of a Solar Cycle of Lunar years.

The length and character of the Exodus year—an intercalary one—will be seen by looking at table *l*, the twelfth of the Cycle which shows which months had alternately thirty days. There are no definite means of knowing the day when the Israelites crossed the Red Sea. But it seems to have been about six days after commencing the march.

The quails sent "at even" indicates that this supply was after sunset when the Sabbath was over on the seventeenth of the "second sacred month."

There is yet another point of interest connected with the Exodus dates. From the exode to the delivery of the law, and from the setting up of the tabernacle to the lifting up of the cloud were each fifty days.

The difference between B. C. given above and that in the margin of the Bible, is owing to the latter being taken from 4004 as the year of the birth of our Lord instead of 3996, which all scholars now admit to be the true year. It is time the erroneous year should be dropped, as it is often misleading.

THE DELUGE—120 YEARS TO THE FLOOD IN 1656.

Noah mentions in Genesis 713 that the Flood came on the earth on "the self-same day," that is, he entered the Ark

on the same day of the week and same day of the month as occurred at some special previous period. On looking at the Antediluvian Solar Cycle, the 5th of the seven years, we see that "the 17th of the second month," when he entered the Ark was Saturday, the old Sabbath day, in the year 1656, and that the same date fell on the same day of the week 120 years previously, viz., in 1536. (There are other instances in Scripture history of this significant completion of periods of time.) Thus the remarkable period of waiting for the repentance of the Antediluvians, mentioned in Genesis 6: 3, was completed to a day.

It is the Solar Cycle which brings round the date of the month on the same day of the week, as is the case with ours, but without the use of weeks of seven days no Solar Cycle exists. I therefore look upon this date of the Flood as the first proof that the Sabbath day was kept up from its institution in the year 0. There are numerous proofs of this character, and I would particularly impress upon public writers, if they wish to preserve the reputation of their names, not to theorize with Scripture history. In how many books have we been told that the Sabbath day was a Jewish institution? In how many volumes do we read of the Flood as having occurred at a period contradictory to all proper investigation and Scripture testimony? Such men might, more to their advantage, be engaged in stone-breaking than teaching the science of Chronology, of which they know nothing—not even so much as a simple Solar Cycle!

The prophecy of the Flood cannot be disassociated from the year 1656, because we see that nine of the ten dates, expressed or implied, in the diary of Noah, are dates of that year and first two months of the next.

As the dates are on the fifth year of the Cycle, it is a sim-

ple process of multiplication to see if the repetition of the Solar Cycle of seven years produces them for the fifth year and whether it was 1656. This was the first test which I made of the accuracy of a Biblical date, and when I saw how it could be done, I began the investigation with some hesitation, for fear I should detect an error and thereby supply means for rejecting the years given for the birth of all the Antediluvian patriarchs and the unbroken observance of the seventh day. In fact, I knew that the detection of an error, if it existed, would destroy all Biblical chronology. My joy was great when I saw that the consecutive repetition of 236 cycles made the first year of the cycle 1652; hence, the fifth year of the same cycle was 1656, the very year we obtain in Gen. 5 when we add the birth of the patriarchs to the 600th year of Noah, when the Flood occurred. This is most marvelous. More so when, as I afterwards saw, that the same accuracy was strictly supported by the Metonic or Lunar Cycle by the eclipse and two transit cycles. To these I invite the reader's attention, and here I wish also to state that I have never found an error in Biblical years. I am certain that if these men who doubt Scripture chronology would only investigate it by the light of advanced science they would indorse the whole of it. Let no man make assertions he cannot prove.

RESULT OF RECENT DISCOVERIES—THE SOJOURN.

"Four hundred and thirty years" sojourn of the children of Israel. (Ex. 12:40.) It informs us that the sojourn of the children of Israel was 430 years, and "at the end of 430 years, even the self-same day it came to pass that the hosts of the Lord went out from the land of Egypt."

The Solar Cycle of the ancient Hebrews shows us that the 15th of the seventh month was Tuesday when the Israelites

left Egypt in 2513, and the beginning of 430 years before that date was also Tuesday, the 15th of the seventh month in the year 2082. As Abraham left the city of Ur in this 2082 the words of Moses plainly refer to these two incidents forming the beginning and the end of the "sojourn." (Thus we see, we have the whole matter within a nutshell.) The period was thus completed to a day, called "the self-same day," because it was the same date of the month and the same day of the week. This marvelous precision is still more clear to us when we observe that to add 430 years to 2082 is 2512. But, Moses says "to the end of 430 years." Now as the seventh month is in the middle of 2082, that year is only six months of the 430; and hence the period of the sojourn must run to the middle of the next year 2513, to form the end of 430 years; otherwise the Exodus would have been in 2512. The fact is one year of the 430 is but six months of 2082, and six months of 2513. If the reader looks at the Solar Cycle he will see this at a glance. Table *a* is 2082 and table *i* is 2513. In both these years Saturday the Sabbath day in the seventh month was the 12th, therefore, Tuesday was the 15th. Compare Exodus 12: 41, 51 with numbers 33: 3, and bear in mind that the seventh month was called the first month after the Exodus.

THE CRUCIFIXION, 4029.

(This is the most important of all fulfilled periods of prophecy.)

It was not till the summer of 1883 that the full meaning of this very impressive prophecy was discovered [at least by many] viz., by Dr. Alder Smith of Christ's Hospital, London, to whom the religious world will forever be indebted. He has certainly accomplished in a few lines what eminent divines have been endeavoring during many centuries to arrange. [There seems to have been a just reason for any, or in fact, for no one understanding the prophetic period of Daniel until the

time appointed by Divine orders, namely:—"The time of the end." (Dan. 12: 4.) Now the time of the end is not the end of time in the sense that some in this case suppose; but the end of the prophetic period: namely, the 2300 days of Daniel 8: 14. From the ninth and tenth verses of the twelfth chapter of Daniel, it is evident that time was to continue from the following words: "But the wicked shall do wickedly."…. "But the wise shall understand." So we see both the wicked and the righteous were still together.]

This eminent scholar found that the years represented by days were not Solar, but Lunar. [Rather a prophetic period or prophetic time; a long period of Lunar years represented by Lunar weeks.] (Dan. 9:25.) "From the going forth of the commandment to restore and build Jerusalem unto the Messiah, the Prince, shall be seven weeks and threescore and two weeks" (69 weeks).

"He shall confirm the covenant with many for one week, and in the midst of the week he shall cause the sacrifice and the oblation to cease." (Midst of a week is half a week).

Result—The sixty-nine and one-half weeks of Dan. 9: are 486½ Lunar years, which are equal to 472 Solar years. The commandment went forth in the middle of Nisan, the seventh civil month and Jesus Christ was crucified in the middle of the seventh civil month early on Friday the 15th, the day after the Passover. See table *m* of the Ancient Hebrew Solar Cycle, also the years of the reigns of the Version Monarchs, showing that the twentieth of our Artaxerxes was 3557 A. M.

Thus, 69 weeks, verses twenty-five and twenty-six.
7 multiplied into days,
483 called years.
3½ "midst of a week," verse twenty-seven.
Total 486½ Lunar years are 472 Solar years.

Four hundred and seventy-two years from the twentieth year of Artaxerxes (Neh. 2:1), which was 3557 A. M., to 4029, when our Lord was crucified.

Hence, we have date of commandment to restore and build Jerusalem:

3557 .... The twentieth of Artaxerxes.
472 .... The above Solar years.

4029 A. M., year of Crucifixion which was our A. D. 30.

It will be seen by the Solar Cycle that table *m* is 4029, and that it must be the Crucifixion year, because Friday is the fifteenth of the seventh month, as shown by Saturday, the Sabbath day, being the sixteenth. The Passover was eaten "in the fourteenth day of the month, at even" (Numbers 9:3), and hence our Lord partook of it on Thursday the fourteenth, being the night before His crucifixion. I showed these facts to Dr. Alder Smith, who, although he had found that 472 Solar years formed a period of Daniel's great prophecy, was at that time unacquainted with the power of Solar Cycles for determining the day of the week on which dates fall, and also the true year of any event. I also showed him the twentieth year of Artaxerxes was certainly 3557, by consecutive counting from all other years of Persian monarchs mentioned in Scripture, more particularly the facts that the margin of Nehemiah 13:6 states that the thirty-second year of Artaxerxes was an intercalary one having extra days added to it, as shown by the words "at the end of the days," the same fact being also shown by the Solar Cycle (see table *c*, year 3569); and hence we have several proofs that table *f*, the twentieth year, was 3557.

The reader must look for himself at these interesting details.

The foregoing shows us that the half week (or the three and one-half day-years) of the seventy weeks mentioned in

Daniel 9:24, are yet in the future, the present period being an interval formed in the midst of the seventieth week.

We also find, when compared with Section II. that:

1. Abraham left Ur on the fifteenth of the seventh month.
2. Israelites left Egypt fifteenth of the seventh month.
3. Jesus was crucified the fifteenth of the seventh month.

Therefore, every intelligent man, whether Jew or Christian, must see that Jesus is the Son of God, the date of His crucifixion being allied to the call of Abraham and the Exodus.

If the reader wishes to see more into the value of Daniel's 70 weeks, the following proof will be interesting. I have shown that 69 weeks multiplied by 7 produce 483 days, called prophetic years. To prove them to be Lunar we must multiply the 483 by 354, which is the number of days in a Lunar year. The product is 170,982 days, which turned into Solar years of 365 days each come to only 468½ years. This is all we can make of them.

Thus	3557,	the 20th of Artaxerxes, Nehemiah 2:1.
	468½	Solar years, as above.
	4025½	A. M.
	3½	the first half of the 70th week.
	4029	A. M., Crucifixion.

Here we see that 468½ Solar years contain the 486½ Lunar years on the previous page, thus proving that the 69 weeks when multiplied by 7 to obtain the number of day-years (483) are Lunar years. They are also 26 Eclipse Cycles of 18 years each. It is interesting to notice that there was another representation of the 69 weeks of Daniel in the building of this second temple, which was finished in 3488. Ezr. 6:15.

Thus,	3488	the temple completed.
Add	69	weeks to represent years.
	3557	the 20th of Artaxerxes when he ordered the restoration of the city.

The following is the Solar and Lunar analysis and proves that the prophecy began in 3557, and ended in 4029. With the half week added they are 69½ weeks and comprise 486½ Lunar years, which are equal to 472 Solar years:

	LUNAR		SOLAR	
	3557	date of command	3557	
(a)	49	years for 7 weeks are	47½	(d)
(b)	434	years for 62 weeks are	421	(e)
(c)	3½	years for ½ week are	3½	(f)
		69½ weeks end	4029 A.M.	
(a)	49		47½	(d)
(b)	434		421	(e)
	483		468½	
(c)	3½		3½	(f)
	486½	years equal to	472 Solar	

How very accurate is our knowledge now of the seventy weeks of Daniel. The reader will bear in mind how the 20th year of Artaxerxes is proved to be 3557 by the thirty-second year being marked in the margin of the Bible as an intercalary year. The end of every third year was the intercalary period. It must also be borne in mind how the Solar Cycle shows that Friday, the crucifixion day, was the 15th of the seventh month 4029, table *m*.

I cannot repeat too often that nothing definite can be done in chronology without the use of the Solar Cycle. The difficulty which we formerly experienced respecting the history of Esther, all vanished when a glance was taken at the Solar Cycle, the dates fitting the sacred Hebrew year formed by the last six months of 3529, table *h*, and first six of 3530 table *i*, which was the 12th of Xerxes. Our difficulties about the seventy weeks of Daniel all vanished the same way by the employment of the Solar Cycle. Mr. Gratton Guiness is all wrong with his chronology for the simple reason that he uses

no Solar Cycle. If he had been a chronologist, he would not have published the book he has.

THE CAPTIVITY.

The first captivity period began in 3395 when Pharaoh Necho carried Jehoahaz captive to Egypt, as recorded in 2 Kings 23: 31 to 36, and ended in 3466. To add seventy to 3395 makes only 3465; but it began in the middle of the year, and therefore runs to the end of the first half of 3466, which was the first of Darius the Mede. Accordingly Daniel, who was carried captive with others in a first deportation of Hebrews to Babylon, by Nebuchadnezzar in 3398, seems to have expected the fulfillment in the first year of Jarius, 3466, and prayed to God. See Dan. 9: 2.

The second, or great period of the captivity began in 3456, which was eleven years after the first period commenced, viz., when the second deportation (carrying away) was effected by Nebuchadnezzar. (2 Kings: 24: 8-16.) It ended in 3476, a period of seventy years. It is easy to find each of these seventy years, because Ezekiel dates from them. See "Years of the Captivity" in this book, and "Ezekiel's dates," and notice them on the Solar Cycle which proves them and shows the day of the week.

CLEANSING OF THE SANCTUARY.

"Unto 2300 days then shall the sanctuary be cleansed." Dan. 8: 14.

This is the first unfulfilled prophecy and relates to the cessation of the desolations of the Church of Christ. We have no definite means, as yet, for understanding their fulfillment; because, in the first place we do not know whether they are literal days connected with the great events belonging to the end of the present dispensation, or whether in the second place they are Lunar or Solar years, now in completion.

Should they not belong to the future, but to the present time, by being considered as years, their value may be 2230 Solar years, which are equal to 2300 Lunar years. But here again we are met with another difficulty, inasmuch as we do not know when they begin.

The chapter in Daniel in which the prophecy is found refers to the ascension of Alexander the Great, called the "he goat," and his conquest of Media represented as "a ram." Alexander ascended in 3660 and conquered the Medes in 3662.

The application of the two events would be after the following example:

Solar.	Lunar.
3660	3660
2230	2300
5890 our 1891	5960

As the sanctuary will be cleansed when the period has expired, the half of the seventh week of Daniel representing three and one-half years would be in them, and in that case stupendous events would be at hand, as they would begin in 1887½ A. D.

It may be, however, that the 2300 days are literal, (they are in the margin called evenings and mornings) and that during their fulfillment the sanctuary will be cleansed; for it seems that the present Christian dispensation is one of grace, an interval in the seventieth week of Daniel, and can be ended any moment. Then the remaining half of the seventieth week, which is three and one half weeks or 1260 days, so emphatically referred to five times in the book of Revelation, will begin.

In order to assist all inexperienced students, I should also state that "Time, Times, and a Half" are 1260 years. Thus a time is 360 years, times are twice 360, and a half a time 180. These 1260 days are referred to on five separate occasions in

the book of Revelation as "forty-two months" 3½ years, or 1260 days. (Rev. 11:2, 3; 12:6, 14; 13:5.) It should also be remembered that 1260 Lunar years are equal to 1222½ Solar years.

DAN. 6, 7 and 8; DAN. 12, 1260, 1290, and 1335 DAYS.

If these three periods are connected with the events which precede the cleansing of the sanctuary or other important events, they are literal days. They would be:

1260 days, are 3 years, or half a week.
30 more.

1290 days, Dan. 7: 11.
45 more.

1335 days, period of blessedness.

The period of Nebuchadnezzar's insanity in (Dan. 4) is thought by some persons to give light on this subject. It is "seven times, that is, seven times 360, or 2520 years." They are called "two seasons" in a cuneform record, the meaning being two intercalary periods of three years each, as the insanity began at the end of the year 3434, which was an intercalary year, table *c*. (See verse 29). Twice 1260 are 2520, but if the years be Lunar, they are only equal to 2445 Solar. Thus,

3435 commencement of seven times.
1222½ first half, or 1260 Lunar years.

4657½ A. M. the desolation Mosque set up in the holy
1222½ place, Jerusalem.

5880 Sept., our 1882.

This date witnessed great trouble in Egypt.

It is interesting to know that 2520 Lunar years are 2445

Solar, which is the same seventy-five years between Daniel's 1260 and 1335.

AN INTERESTING EVENT.

Dan. 10: 2-4 is beautifully interesting and shows the great advantage of pursuing all chronological studies by the powerful help of Solar Cycles. If we turn to table *i*, of the Ancient Hebrew Solar Cycle, we see that Daniel's three full weeks of fasting began on Saturday, Sabbath day, the third of the first month sacred, which is seventh civil and extended to the "24th" which he mentions in verse four. We find the year by subtracting 534, the B. C. year in the margin of the Bible from 4004, the old nativity date; the result is 3470, as the year of Daniel's fast. To find this 3470, it will be seen by the list of the first years of the successive cycles that 3462 was a first one, that is table *a*, hence, by counting forward, table *i* is 3470, The true B. C., 526, from 3996 gives the same result. It need scarcely be said that an intelligent mind will never surrender history of this kind for theories, because it would be just as easy to dislodge the sun from its position as to move the dates of Scripture. They are astronomical.

PROPHETIC PERIODS ARE CYCLES OF THE ECLIPSES.

It is very remarkable to find that the prophetic periods of Daniel are cycles of the eclipses; for instance, he not only records his visions in common with other prophets on the Sabbath day (See Dan. 10: 4 and the Ancient Hebrew Solar Cycle, table *i*, 20th of first month, which is the seventh civil), but his year like the Creation, the exode, the birth of Christ, etc., was the commencement of a Common Team of eclipses. His "time" (Chap. 12:7) known as 360 years, is twenty cycles of the Common Team and the full period, "time, times and an half" (1260 years) are seventy cycles of eighteen years each, the period when a Common Team of seventy cycles comes round.

Again, his 360 years are twenty-four Solar Cycles of fifteen years, his 1260 are eighty-four, his thirty are two, and his forty-five are three (verses 12, 13.) I must reserve these for another publication. But I find them a guide to their interpretation. [See table on following page.]

It must be admitted that although the chronology of the Resurrection is correct and astronomically true, yet the narrative is not consecutive. It is just such an one as we often have in a legal court when obtained from half a dozen independent witnesses. The following years to be the true outline as gathered up from the written testimony:

On the early morning of the Resurrection, Mary Magdalene, with certain other women came to the tomb and found the stone removed. Mary, in alarm, thinking that the body had been taken away, ran to Peter and John, who, sharing her fears, hastened to the tomb followed by Mary. Iohn in anxious haste out-ran Peter, but seeing the grave-clothes very neatly folded up and no corpse, started back in consternation. Peter coming up entered the tomb and was followed by John, and both being convinced that the body was not there returned to their habitation. Before the arrival of Peter and John, the other two women who came with Mary entered the tomb and saw an angel, who told them that Christ had risen and that they must go and tell it to the disciples. As they were on their way the Saviour appeared to them, and also told them to go to the disciples, they having seen Him. After this our Lord appeared to Mary, who had remained at the Sepulcher when Peter and John had left, which is just what a distressed woman would do. Towards evening two disciples were walking to Emmaus, seven miles distant; the risen Lord joined them, and when they subsequently recognized Him, He passed from their observation. They therefore hurried back, running and walking in

DATES OF THE CRUCIFIXION AND RESURRECTION OF JESUS CHRIST.—ASCENSION AND PENTECOST DAYS.

Year 4029 A. M., Table m, or 13th of the Hebrew Solar Cycle, 30 of the Christian Era.

FIRST SACRED OR SEVENTH CIVIL MONTH.			SECOND SACRED OR EIGHTH CIVIL MONTH.			THIRD SACRED OR NINTH CIVIL MONTH.		
1	F	Correspond to our	1	S	Correspond to	1	M	Correspond to
2	**S**	*March.*	2	M	(*April.*)	2	Tu	(*May.*)
3	S		3	Tu		3	W	
4	M		4	W		4	Th	
5	Tu		5	Th		5	F	
6	W		6	F		6	**S**	
7	Th		7	**S**		7	S	Pentecost, 50 days after the
8	F	John 12:1.	8	S		8	M	resurrection and anni-
9	**S**	Christ at Bethany.	9	M		9	Tu	versary of the delivery of
10	S	Anointed by Mary.	10	Tu		10	W	the law.
11	M	Entry into Jerusalem	11	W		11	Th	
12	Tu		12	Th		12	F	
13	W		13	F		13	**S**	
14	Th	Passover at even.*	14	**S**		14	S	
15	F	CRUCIFIXION.	15	S		15	M	
16	**S**	In the Sepulchre.	16	M		16	Tu	
17	S	Resurection on 3rd day.	17	Tu		17	W	
18	M		18	W		18	Th	
19	Tu		19	Th		19	F	
20	W		20	F		20	**S**	
21	Th		21	**S**		21	S	
22	F		22	S		22	M	
23	**S**		23	M		23	Tu	
24	S	John 20:26.	24	Tu		24	W	
25	M		25	W		25	Th	
26	Tu		26	Th	Ascension on 40th day.	26	F	
27	W		27	F	Acts 1:3.	27	**S**	
28	Th		28	**S**		28	S	
29	F		29	S		29	M	
30	**S**					30	Tu	

* "Thou shalt sacrifice the Passover at even, at the going down of the sun." Deut. 16:6.

their excitement to confirm the statement of the women, but on seeing the apostles, were told that the Lord had sometime since they saw Him appeared to Peter. In the evening of the same day the manifestation of Christ so graphically described by St. John (14:27) took place before all the apostles except Thomas. On the next Sunday evening He appeared to them again, Thomas being present. Another subsequent appearance was when seven of the disciples were fishing (John 21:14), and the next recorded visible presence was to the apostles in Gallilee. Following this the Lord appeared to James (1Cor. 15:7), with whom He probably made the appointment to meet the disciples on the Mount of Olives, when "500 brethren" assembled, and probably most of them witnessed the Ascension.

Interpretation of the Word a Vital Point.

It is not the purpose of the author of this compilation to assume the prerogative of an expounder of the Word of God; this we have previously stated. We verily believe the Word is its own interpreter; neither would we wish to act as an arbitrator between man and man, for upon that subject every intelligent person is held amenable to his Creator alone. Yet, we believe it our duty in this *particular* work that we have taken in hand, to "rightly divide the Word of truth" to the best of our ability.

We have given Prof. J. B. Dimbleby's article, on the subject of the Sanctuary and the 2,300 days, the Crucifixion, etc., complete, because of the cycles which we believe he has accurately given, establishing other historical records and events, which establishes beyond the shadow of a doubt the Divine authenticity of the book we call the Bible. We now believe it our duty to call attention to a vital point in the article of the Sanctuary. This, without the aid of the infallible chart, the Word of God, would surely be misleading.

The entire misunderstanding with Mr. Dimbleby seems to be in not understanding. First, what the Sanctuary was. Second, what was its use; or the relations it sustained to the inhabitance of the Christian dispensation. In order to see the dilema and muddle Mr. Dimbleby has gotten into, we will only quote his own words. We turn back a little to the heading of the article on the Crucifixion and read thus: "This eminent scholar (referring to Dr. Alder Smith) found that the years represented by *days* were not *Solar*, but *Lunar*."..... Again a few more lines further on he says: "The sixty-nine and one-half weeks of Dan. 9, are 486½ *Lunar years*, which are equal to 472 *Solar years*." Now we go forward a page or so to the heading of his article, "Cleansing of the Sanctuary," and find under the first short paragraph the words: "This is the first unfulfilled prophecy and *relates* to the *cessation* of the *desolations* of the Church of Christ." Again he says: "We have no definite means, as yet, for understanding their fulfillment; because, in the first place we do '*not know*' whether they are literal days connected with the great events belonging to the end of the present dispensation, or whether in the second place they are *Lunar* or *Solar years* now in completion." He sums up the matter thus: "The application of these two events would be after the following example: If Solar time 5890 our 1891 (but if) Lunar 5960."

"As the sanctuary will be cleansed when the period has expired, the half of the seventieth week of Dan., representing three and one-half years, would be in them, and in that case stupendous events would be at hand, as they would begin in 1887½ A. D."

His article was written in A. D., 1885.

Again, he says, "It may be, however, that the 2,300 days are literal, (they are in the margin called evenings and

mornings) and that during their fulfillment the sanctuary will be cleansed; for it seems that the present Christian dispensation is one of grace, an interval in the seventieth week of Dan., and can be ended at any time.

"In order to assist all inexperienced students I should also state that 'time, times, and a half,' are 1260 years. Thus, a time is 360 years, times are twice 360, and a half time 180," [which = 1260.]

The last paragraph in regard to the assistance of the "inexperienced" may be kindly regarded on his part, but of what use to mortal man can these days be, if we know neither the end nor the beginning to whom or where they apply? They would be as useless to "the inexperienced" as would the satelites of Jupiter.

We have seen that the two periods in which Mr. D. had looked for a fulfillment of the days in question have passed, namely, the years A. D. 1887½ and 1891, and the events not yet transpired, for which he evidently looked, namely, the transaction of a cleansing process, to transpire on this earth during the Christian dispensation, a promise of which cannot be found in the Word of God. "The wheat and the tares will grow together until the harvest," "the harvest is the end of the world, and the reapers are the angels." (See Luke 13:30, 39.) We believe a just and true solution can be given upon this subject from the inspired Word, and the matter put beyond doubt.

It is a little singular, that after Mr. Dimbleby had found the commencement or starting point for the 2300 days, and then found the exact point in those days, where the Messiah was "*cut* off" or crucified, that he should know nothing about the length of days that existed between the two given points, or the nature of the days. It seems about like this: Mr. D.,

with others, was looking with such positive assurance for an *event* to transpire, which they had fixed in their minds, at a certain time; the events for which they looked not having transpired, they were dismayed and confused.

In order to come to a definite conclusion in regard to the nature of the days referred to by Mr. D., we only have to refer to a few passages of Scripture. First, that the days were symbolical, we conclude from this fact: they were uttered in the place of, and in connection with a symbolical prophecy.

We look at Daniel 7: 16, 17, for a solution of the first proposition: "I came near unto one of them that stood by, [an angel previously mentioned] and asked him the truth of all this. So he told me, and made me know the interpretation of the things." (16.)

"These great beasts, which are four, are four kings, which shall arise out of the earth." (17.)

We understand by this that the angel would have Daniel understand the "truth" for which he inquired, namely, that these beasts were not absolute kings, but that they represented or *symbolized* four kingdoms. Kings implies kingdoms.

In order to determine what the symbol of a prophetic year is we turn to Ezekiel 4: 6, and we find the following are the declarations of an angel: "And thou shalt bear the iniquity of the house of Judah forty days; I have appointed thee each day for a year." Again Num. 14: 34 gives the same period as a symbol. "After the number of the days in which ye searched the land, even forty days, each day for a year, shall ye bear your iniquities, even forty years, and ye shall know my breach of promise." Now, let us see if we can find out from another inspired source the definition of a week of years, or what reasons we have for thus applying it. Dan. 4: 25 says: "They

shall drive thee from men, and thy dwelling shall be with the beasts of the field, and they shall make thee to eat grass as oxen, and they shall wet thee with the dew of heaven, and seven times shall pass over thee, till thou know that the most High ruleth in the kingdom of men, and giveth it to whomsoever He will."

Josephus tells us that the days of Nebuchadnezzar's insanity in which he escaped the search of men, was seven years; then here we have the week of years.

Now if we turn to Rev. 11: 2, 3, we have the same prophetic period, or a section of the entire 2300 days, namely 1260 years in two other forms as follows: "And the holy city shall they tread under foot forty and two months." Again 42 months, 30 days to the month Roman time, 42x30 equals 1260 years. Third verse, (latter clause) "a thousand two hundred and threescore days" .... which equals 1260 years. Once more—Dan. 9: 24-27 gives the explanation of the Messiah's time in which the gospel was to go, and the oblation to cease, the cutting off or the crucifying of the Saviour. Thus we have the terms of days, weeks, months and times, all symbolical of one and the same period of time, and as we never knew of more nor less days than seven days (7) in a week, and as portions of the *symbolical days* are counted by year-weeks, or cycles of seven years, can we consistantly count the time in any other way than cycles of seven years each?

We will now turn the reader over to another writer who has given an able solution of this very important subject as the reader will see. Prof. U. Smith has given us permission to copy his article from "Synopsis of Present Truth," which here follows, and in it we shall see just what bearing it has upon the present generations, and what was to be its cleansing. We shall find that that which was to the Hebrew

people a type to be fulfilled, is to us the antitype met in this present dispensation and generation. Hence, the vital importance to you and to me, and every human being. May it be considered with care, that the reader may profit thereby, is the earnest desire of the writer.

CHAPTER X.

The Seventy Weeks and Twenty-three Hundred Days.

IN the ninth chapter of Daniel we find a further explanation of Daniel eight. Mark the connection between the two chapters. First: Gabriel appears again to Daniel, verse twenty-one, the very one who in the vision of chapter eight had been commanded to make him understand that vision, but who had not yet completed that mission. Second: Daniel refers to the vision at the beginning in which he had seen this angel. This must be the vision of chapter eight, as no other had intervened between that and this. Third: Gabriel said, "I am now come forth to give thee skill and understanding," the very work he was intrusted with in chapter eight, but had been obliged on Daniel's account, to postpone. Fourth: The angel then himself refers back to the vision of chapter eight, saying, "understand the matter" and consider "the vision." Fifth: He then commenced with the very matter omitted in chapter eight, namely, the explanation of the time: "Seventy weeks are determined upon thy people." The word here rendered determined, signifies "cut-off." Seventy weeks are cut off; from what? From the 2300 days. Wherever the seventy weeks commence, there the 2300 days begin, [or commence.]

Gabriel then proceeds to give the starting point. When a commandment should go forth to restore and build Jerusalem, the seventy weeks would begin. The first decree that was issued after this time, in any way affecting Jerusalem, was the decree of Cyrus, B. C. 536, for the return of the Jews and the rebuilding of the temple. (Ez. 1.) But this only provided for

the temple, and fell far short of granting the "restoration" to which the prophecy points. This work was hindered by the enemies of the Jews in the reign of Artaxerxes the Magian, B. C. 522. (Ez. 4.) The decree of Cyrus was reaffirmed by Darius Hystaspes, B. C. 519, and the work on the temple again went forward. But this decree like that of Cyrus was too limited in its provisions. At length Ezra obtained a decree from Artaxerxes Longimanus, in the seventh year of his reign, B. C. 457, (Ez. 7:7) containing provisions for the complete restoration of the Jewish State. This decree, written in the original in Chaldæic or Eastern Aramaic, the language of the Persian court, is found in full in Ez. 7:12–23. When this went forth the prophecy was met, all three of the decrees constituting "the commandment," as expressed in Ez. 6:14, and the date of its going forth being that point when the last one with its full provision, was carried into effect by Ezra. (Ez. 7:9.) The commission to Nehemiah thirteen years later, was no decree, and is not to be taken into the account.

Seven weeks or forty-nine years were allotted to the literal work of building the city and arranging the affairs of the State. This was completed in the last act of reformation by Nehemiah, in the fifteenth year of Darius Nothus, B. C. 408, exactly forty-nine years from the commencement of the work by Ezra, B. C. 457. Sixty-two weeks, 434 years more, were to extend to Messiah the Prince. Christ was set forth as the Messiah, or the Annointed at His baptism when He was annointed with the Holy Ghost. (Acts 10:37, 38; 4:27; Luke 4:18, etc.) This period, therefore, reaches to His ministry, which commenced A. D. 27. For John began his ministry in the fifteenth year of Tiberius Cæsar, (Luke 3:1) which was in A. D. 27, and Christ entered upon His work six months later, which would bring us to the autumn of that year. And to

this point exactly, the sixty-nine weeks or 483 years bring us, reckoned from B. C. 457 in the autumn when Ezra commenced his work at Jerusalem. Here Christ went forth proclaiming "The time is fulfilled," (Mark 1:15), which can have reference to nothing else but the fulfillment of this period which was to bring us to Messiah the Prince.

After the seven weeks and the sixty-two weeks He was to be cut off, or in the middle of the seventieth week, cause the sacrifice and oblation to cease. These expressions point unmistakably to the crucifixion of Christ. The ministry of Christ continued just three years and a half, for he attended but four passovers, at the last of which he was crucified. (John 2:13; 5:1; 6:4; 13:1.) If the sixty-ninth week ended in the autumn of A. D. 27, the middle of the seventieth week, three and a half years further on would be in the spring of A. D. 31, and right there the crucifixtion took place. (See Hale's Chronology.) We go forward three years and a half more to the termination of that week, and find ourselves at the end of the seventy weeks in the autumn of A. D. 34. How much yet remains of the 2300 years? 2300 − 490 = 1810; add 34 to 1810 = 1844, where the whole period of 2300 years expired. So definitely and easily is the application of this period of 2300 years ascertained. The seventh year of Artaxerxes when Ezra received his commission is placed in B. C. 457 by Ptolemy's canon, and the accuracy of that canon is demonstrated by the concurrent agreement of more than twenty eclipses. The starting point for the 2300 days cannot, therefore, be moved from B. C. 457 without showing the inaccuracy of Ptolemy's record of these eclipses. But Prideaux says that they have been repeatedly calculated and have been found invariably to fall where Ptolemy has placed them. Connections, Vol. 1, p. 242.

THE SANCTUARY.

"The prophecy of Dan. 8:14 simply declares that at the end of 2300 days the sanctuary shall be cleansed. The subject of the sanctuary thus becomes the central and controlling question in this prophecy. If we regard it as something which is to be cleansed only at the coming of Christ, then the 2300 days must extend to Christ's coming. Many hold it in this light, and hence their continual efforts to readjust the prophetic periods and set new times for the Lord to come.

The word sanctuary occurs in the Bible 144 times, and both the definition of the word and its use show it to mean a holy or a sacred place, and a dwelling place for God. This fact should guard any one against applying it to any object which will not bear this definition, or to which it is not applied in the Scriptures.

The earth is not the sanctuary for it is not a holy or sacred place, and the Scriptures never call it the sanctuary.

The land of Canaan is not the sanctuary for the same reasons. Neither can the term be applied to any limited portion of the land, as to Jerusalem or Mt. Zion; for though these were spoken of while the Hebrew people maintained the favor of God, as holy and a place where God would dwell, it is evidently because His temple was there, which He had caused to be erected for His habitation. For this reason Moses once speaks of the mountain of inheritance as the sanctuary, (Ex. 15:17), just as David calls Judah in one instance the sanctuary, (Ps. 114:2) and in another instance Mt. Zion (Ps. 78:68); but the tribe was not the mountain any more than the mountain was the sanctuary; but the tribe possessed the mountain and upon the mountain was the sanctuary "built," says David, like "high palaces." (Ps. 78:69.) However, Paul settles the question so far as pertains to the whole Mosaic dispensation covered

by the first covenant, and tells us emphatically that another object was the sanctuary during that time. Heb. 9: 1, 2.

The Church is not the sanctuary, for it is nowhere called such. One text, mentioned above, (Ps. 114: 2) is sometimes quoted to prove the Church the sanctuary; but that has been already explained, and even if it was to be taken in its most rigidly literal sense, it would only prove that a particular tribe, and not the whole Church was the sanctuary. But the statement quoted from Paul (Heb. 9:1, 2) applies to this very time when Judah constituted a portion of God's people, and he tells us that something else was then the sanctuary. And further, if the Church ever constituted the sanctuary, even then it could not be the sanctuary of Dan. 8: 14; for there the Church is brought to view by the term "host" as an object entirely distinct from the sanctuary.

But to return to Paul's statement in Heb. 9: 1, 2. What is that which he says was the sanctuary during the continuance of the first covenant? Answer, the tabernacle built by Moses in the wilderness of Sinai, which was afterward embodied in the temples of Solomon, Zerubbabel, and Herod. This is described in full in Ex. 25, and onward. This settles the subject of the sanctuary down to the time of Christ. The only question now to be decided is: Has there been a sanctuary since that time? and, if so, what?

These questions are definitely answered in the writings of Paul. He says that the second covenant has a sanctuary, the same as the first. The new covenant was introduced and ratified by Christ. He is its minister. His ministry is performed in Heaven. He is there a minister of the sanctuary, the true tabernacle, which the Lord pitched and not man. (Heb. 8: 1, 2.) The sanctuary of this covenant is, therefore, where the minister is, in Heaven. The sanctuary of the first covenant

was a type of the heavenly sanctuary (or) the new. Moses, when he made the tabernacle, made it after a pattern. (Ex. 35: 9, 40; 26: 30; Acts 7: 44; Heb. 8: 5.) That was made with hands (by men) (Heb. 9: 24); the one in Heaven, not by men, but by the Lord, (Heb. 8: 2; 9: 11.) The earthly sanctuary is twice called a figure, and once a pattern of the sanctuary in Heaven. (Heb. 9: 9, 23, 24.) The heavenly sanctuary is called the greater and more perfect tabernacle, and the true, in comparison with the earthly. Heb. 9: 11, 24.

But more than this, John in his vision of things in Heaven saw there the antitype of the golden candlestick, the altar of incense, the golden censer, and the ark of God's testament, all instruments of the sanctuary, the presence of which unmistakably proves the existence of the sanctuary where they were seen. And John also had a view of the sanctuary itself, which he brings to view under the name of "The Temple of God in Heaven." (Rev. 4:1, 5; 8:3; 11:19.) Thus it is called also by David and Habakkuk. (Ps. 11: 4; Hab. 2: 20.) It is called God's "holy habitation" by Jeremiah and Zachariah. Jer. 25: 30; Zech. 2: 13.

Having found the sanctuary, we now inquire, what is its cleansing? With the sanctuary there were connected instruments of service and a priesthood. The sanctuary contained two apartments, separated by a vail. The first was called the holy place, the second the most holy. In the holy place were the candlestick with seven branches, the table of show-bread and the altar of incense. In the most holy was the ark, containing the tables of the ten commandments. The cover of the ark, beaten out of a solid piece of gold with the figure of a cherub on either end, was the mercy-seat. In this sanctuary the priests ministered. This ministry is described in Lev. 1 and onward. When a person had sinned, he brought his

offering to the door of the tabernacle to the priest, laid his hands upon the head of his offering, and confessed upon him his sin, took his life, and the blood was taken by the priest into the sanctuary and sprinkled before the vail. His sin was thus transferred to the sanctuary. This went on through the year continually, sin all the time accumulating in the sanctuary till the tenth day of the seventh month, when the priest performed a special service in the most holy place, to close the yearly round of ministration, called the cleansing of the sanctuary. On this day two goats were brought and set apart by lot to the Lord and to Azazel. (See Lev. 16: 8, margin.) The blood of the goat for the Lord was taken and sprinkled by the priest upon the mercy-seat in the most holy place, to make atonement for the sanctuary and for the sins of the people. Coming out he confessed over the scape-goat all the sins of the people and thus placed them upon his head. (Lev. 16: 21.) This goat was then sent away by the hand of a fit man into the wilderness. Thus the sanctuary was cleansed and sin was put away from the people.

But all this was a figure. That sanctuary, those offerings, the work of the priests, all were figures. Paul says of the priests that they "served unto the example and shadow of heavenly things." Heb. 8: 4, 5.

All looked forward to the greater and more perfect priesthood after the order of Melchisedec, performed, Paul says, by Christ in Heaven. Christ is at once the antitype of the offering and the priesthood. He first shed His blood and provided the offering. Then He entered upon His work as priest. What the earthly priests did in figure, He does in fact. They transferred the sins of the penitent to the earthly sanctuary in figure. He transfers them to the Heavenly sanctuary in fact, where Christ our High Priest has entered. We come to Christ

for pardon and this is the way we receive it. To deny this is to deny all that Paul has taught us in the book of Hebrews respecting the relation of the work of those ancient priests to the work of Christ as our High Priest in heaven.

The heavenly sanctuary must be cleansed for the same reason that the earthly was cleansed. This Paul expressly states. (Heb. 9:22, 23.) Any one who objects to things being cleansed in heaven, must settle that with the apostle. The cleansing, however, was not from physical uncleanness, but from sin. When was this to be cleansed? At the end of 2300 days in 1844. There was no other sanctuary then in existance [to meet the requirements of the declaration of the Angel to Daniel], but the heavenly sanctuary of the new covenant; hence, that is the one to which that prophecy applies. How is the cleansing in this case to be performed? Just as in the type, by a closing service in the most holy place. The high priest passes into the most holy which he enters only for this purpose, makes the atonement by the offering of the blood upon the mercy-seat, and closes the round of sanctuary service.

In the type this round was completed every year. In the antitype it is performed once for all. The type and the prophecy of the 2300 days hold us to the conclusion that in 1844 Christ entered upon his final act as Priest in the second apartment of the sanctuary in Heaven. In the type one day of the year was set apart to this work, and a portion of the day was actually employed in the service. In the antitype the time is indefinite, but it must be comparatively brief.

As this concludes Christ's work as priest, with it probation ends, as there is no more mercy to be offered. And when that point is reached all classes are decided for eternity. But this work of decision is a work of investigative judgment. It

must be the first part of that threefold work of judgment solemnly declared in God's Word to await all mankind, first: to decide all cases; secondly: to determine the rewards or punishments; thirdly: to execute the sentence written. But Christ does not make His second advent till His work as priest is done. Therefore, before the coming of Christ, a portion of the work of Judgment transpires and probation ends. This accords with Rev. 22: 11, 12: "He that is unjust let him be unjust still, ... and he that is holy let him be holy still. And, behold, I come quickly." It accords also with the necessities of the case, for when Christ appears there is no time allotted for a work of Judgment, yet all the righteous dead are then raised, leaving the wicked to sleep on for a thousand years, and all the righteous living are changed in a moment, in the twinkling of an eye. This conclusively shows that decision must have been rendered in their cases before the coming of the Lord.

In the cleansing of the sanctuary we have just the time and place for this preliminary or investigating work of Judgment. This is the very nature of the work of Christ at this time to put away sin and so decide who are righteous. This involves an examination of the books of record containing the deeds of every man's life; for all judgment is rendered according to every man's work written in the books. (Rev. 20:12.) Hence, in the account of the opening of this scene in the most holy of the Heavenly Sanctuary, as given in Dan. 7:9, 10, we read that "the Judgment was set and the books were opened." This is before the coming of Christ, for it is before the destruction of the [ten-horned] beast on account of the great words of the little horn. (Verse 11.) Here is where the Son of Man is brought to the Ancient of Days, and receives His kingdom,

which kingdom He receives before His return to this earth. Dan. 7:13,14; Luke 19:12.

Here sins, repented of and pardoned, are blotted out (Acts 3:19, 20); which work being ended, Christ is sent the second time to this earth. But if at this time a person's sins are not in a condition to be blotted out, his name is blotted out of the Book of Life. (Rev. 3:5.) Here Christ confesses the names of His people before His Father, receiving of the Father acceptance of them through Him.

This is the finishing of the mystery of God, brought to view in Rev. 10:7. The mystery of God is the gospel to all nations. (Eph. 3:3 compared with Gal. 1:12; Eph. 1:9, 3:9; Rom. 16:25, 26; Col. 1:25, 27) The finishing of this mystery must be the close of the gospel work which will cease when Christ's work as priest is done. Therefore, the cleansing of the sanctuary, the investigative Judgment, and the finishing of the mystery of God, are all one and the same work.

The commencement of this work is marked by the end of the great period of 2300 days, and the commencement of the sounding of the seventh angel, the last of the series of the seven trumpets. The angel of Rev. 10:6 announces the close of the prophetic time. This must be prophetic time, for literal time, duration, continues in the days of the seventh angel subsequently mentioned, and probationary time continues in the announcement of another message of mercy. (Verse 11.) Prophetic time ends with 2300 days, which is the longest prophetic period and reaches down to the latest point. Hence, Rev. 10:6 brings us to the conclusion of 2300 days. Then, said the angel to Daniel, shall the sanctuary be cleansed. Then, said the angel to John, shall the mystery of God be finished; which is the same thing. [This gospel of the Kingdom.] This he said would be in the days when the seventh angel should begin to

sound; that it would occupy the first years of his sounding. And again John says, when the seventh angel began to sound, the temple of God was open in heaven, and there was seen in His temple the ark of His testament. (Rev. 11:19.) This introduces us into the second apartment of the heavenly sanctuary; but the work in that apartment is the cleansing of the sanctuary, the investigative Judgment, the finishing of the mystery of God, which consequently commenced when the seventh angel began to sound.

The sins being borne from the sanctuary in the type, were laid upon the head of the scape-goat, which was then sent away to perish. This was the shadow of some service in connection with the heavenly sanctuary by which our sins are to be put away, in fact, forever. Upon whom could they more appropriately fall at last than upon the devil, the author and instigator of sin? Satan is the antitypical scape-goat. Azazel, (Lev. 16:8, margin,) is held on good authority to mean the devil. True, Christ is said to have borne our sins, but that was upon the cross before he commenced his priestly work. He never after bears them except as priest; and the last he does with them is to lay them upon the head of their author, the devil, who is sent away with them to a land not inhabited. The account of this binding of Satan is found in Rev. 20:1-3. At the end of the thousand years, being loosed out of his prison by the resurrection of the wicked, whom he then again has power to deceive, even to bring them up against the camp of the saints, (Rev. 20:8, 9,) he is, with them, forever destroyed by fire from God out of Heaven. Then comes the day of execution of judgment, and perdition of ungodly men. (2 Pet. 3:7.) Sins are then put away forever. Evil is destroyed, root and branch. A new heaven and earth succeed the old. (Verse 13.) The saints enter upon their everlasting inheritance,

and the universal song of jubilee goes up from a holy and happy universe to God and the Lamb. (Rev. 5: 13.)—Synopsis of Present Truth, by U. Smith, Battle Creek, Mich., Pps. 22-28.

In view of statements made by skeptics in regard to the resurrection of the Saviour not having been witnessed by any one, and disbelieved in by the Jews, also some of His own disciples, and those who claimed He had risen, only claimed that He had been seen by some 500 at most, we have concluded to give a chapter on that subject. The foregoing chapter we believe to be from a Scriptural standpoint, and may be read with profit by all Biblical students, whether Catholic or Protestant. By permission of the publishers we give the pamphlet complete for we believe that, to those who will read it, its results and conclusions will be final:—

CHAPTER XI.

Day of the Crucifixion and Resurrection of Christ.

HOW LONG DID CHRIST LIE IN THE GRAVE?

THE questions, on what day was Christ crucified? how long did he lie in the grave? and on what day did he rise from the dead? are questions which naturally invite the interest and study of every Christian student. They are questions which have an intimate relation to other subjects, and upon which it is therefore important that correct views be entertained. It is a cause of regret that sentiments are being advanced upon these points, and seemingly promulgated with especial activity at the present time, which are not only untrue in themselves, but calculated to work immense mischief to the Sabbath cause.

The views to which we refer are: 1. That Christ must lie in the grave seventy-two full hours, because it is said that he was to be "in the heart of the earth three days and three nights;" and 2. That he was consequently buried at the close of the day on Wednesday, and rose at the closing of the day on the Sabbath, or just before the first day of the week commenced.

Against this position we present three indictments:—

1. It is founded on warranted assumption.

2. It is calculated to damage, rather than help the Sabbath cause.

3. It is contrary to the Scriptures.

1. It is founded on assumption. The text to which appeal is first made is the one solitary declaration found in Matt. 12:40. "For as Jonas was three days and three nights in the

whale's belly; so shall the Son of man be three days and three nights in the heart of the earth." The statement in Jonah, to which allusion is here made, is simply this: "And Jonah was in the belly of the fish three days and three nights." Jonah 1:17.

How does this prove that the Saviour was to lie in the grave for seventy-two hours? "Why," it is answered, "the expression, 'three days and three nights,' means just seventy-two hours, no more, no less; for as one day and one night embrace twenty-four hours, three days and three nights would be three times twenty-four hours, that is, seventy-two hours; and, secondly, the expression, 'the heart of the earth,' where the Saviour was to be three days and three nights, means the grave. Therefore, Christ was to lie in the grave seventy-two hours."

THREE DAYS AND THREE NIGHTS.

In reference to the first part of this answer we inquire, Where is the proof that the expression, "three days and three nights," means just seventy-two hours, and never any less? The response is, "That is what any one would understand by it at the present time." Yes, but what *we* understand by it now, has nothing to do with the matter. The question is: What did *they* understand by it, by whom the New Testament was written? In what sense did they use it? What was the *usus loquendi* of that age? If we can ascertain this, we can tell what meaning we must give the expression in the New Testament, however much the sense in which it is used may have changed between that time and ours.

We easily find testimony to show that the expressions, "three days," "after three days," "three days, night or day," were used by the writers of the Bible as expressions not always signifying a period beginning with the first minute of the first day, and reaching to the last minute of the third, but

taking in only a portion of the first and third, including, of course, the whole of the second. Thus we read in Gen. 42: 17, that Joseph put his brethren in ward *three days*. Here the word "day" is used in its broad sense, covering the dark part as well as the light. It is the same as if it read that he put them in ward three days and three nights; for if we subdivide the day into its light and dark parts, it would take three of each of these parts to make three days, and the expression "three days" must include all these parts. Yet *on the third day*, presumably in the morning of that day, Joseph made a proposition to them, which they accepted, and their sacks were then filled with corn, and they departed on their journey, which would naturally take the greater portion of the light part of that day. Now it must be shown that Jonah and Matthew used the expression respecting the three days in a different sense from that in which the writer of the book of Genesis used it, or it must be admitted that that expression does *not* mean seventy-two full hours.

Again in 1 Kings 12: 5 we have a record of what Jeroboam said to the people, in these words: "Depart yet for three days, then come again to me." This would indicate a definite period of just three days, if we should interpret it with the ultra rigidity of modern critics; but in 2 Chron. 10: 5, the same expression is given as follows: "And he said unto them, 'Come again unto me *after* three days.'" But in both records (1 Kings 12:12, and 2 Chron. 10: 12) it is stated that, in accordance with this arrangement, the people returned *on the third day:* "So Jeroboam and all the people came to Rehoboam *on the third day*, as the king bade, saying, 'Come to me again on the third day.'"

This testimony shows that the terms, "three days," "after three days," and "on the third day," are used as synonymous

expressions. But a little tract has been used by Elder N. Wardner, entitled, "Prophecy of Christ Concerning His Burial and Resurrection," in which he contends that it is a very loose method of interpretation, to claim that "three days and three nights," mean a period that would terminate on the third day; and he attempts to dispose of such passages as we now have before us by simply remarking, "No nights are named." Indeed! What possible difference can this make? Is not the word "day" here used in its broad sense, including both the light and the dark parts? and would not "three days" include "three" each of such parts? Most assuredly the word is so used; and the expression in each of the instances referred to, is therefore exactly equivalent to "three days and three nights."

In Esth. 4:16, and 5:1, we find an expression still more puzzling to those who deny that it was the custom of Jewish times and the Jewish people, to use the expression "three days and three nights" to signify a period ending on the third day, and not embracing seventy-two full hours. The verses referred to state that Esther requested the Jews to fast with her three days. She said, "Fast ye for me, and neither eat nor drink three days, *night or day.*" She added, "I also and my maidens will fast likewise;" that is, three days, night and day. Would this passage be any stronger if it read, "three days and three nights?" Any one can see that this is just the same as saying, "three days and three nights." Mr. W. attempts to dodge this by saying, "But the number of nights are not named [!], and the statement does not require more than two; depending on the time of day they began to fast." But we submit to the candid reader, if the numeral adjective "three" does not cover both members of the distributive clause, as well as one; thus, "three days," then dividing it up into its light and dark parts, "night or day;" how many of such parts would be required

to make the three days? How many light parts—days?—Three. How many dark parts—nights?—Of course the same number, *three*. But Mr. W. would have us read it something after this fashion: "Three days, *night* or *day*, that is, *three* days and—well, let's see, *two nights*, that's enough for that." It may seem to him consistent to wrest the Word of God by arbitrarily changing the term "three" in the first part of the sentence into "two" in one member of the last part; but it does not so appear to us. His conclusion in regard to the passage is, "It is *not* parallel to the statement, '*three days and three nights.*'" To make this statement true, the word "not" should be taken out, and the italics transferred to the word "is," so as to make it read, "It *is* parallel to the statement 'three days and three nights.'" So after Esther had used the equivalent of the expression, "three days and three nights," during which they were to fast for her, the record says that on the *third* day Queen Esther went into the presence of the king, and obtained her request.

It will be noticed that Mr. W.'s exposition of this passage destroys his claim on Matt. 12:40; for he admits that three light portions of the day are here distinctly specified, and yet *on* the *third* one of these divisions, Esther proceeded to the king. So the expression "three days," does not include the whole of the time embraced in these days, but only the first and second, and a portion of the third. Now if the expression "three days," applied explicitly to these light divisions, may mean only two and a portion of the third, by parity of reasoning, the expression "three nights," applied to the dark divisions, may mean only two and a portion of the third; and the expression "three days and three nights" may be used without signifying absolutely seventy-two hours.

There are nine passages that declare that Christ was to

rise "the third day," as Matt. 16:21; 17:23; 20:19, etc.; one that He did rise "the third day" (Acts 10:40), and two that He should rise after "three days." (Matt. 27:63; Mark 8:31.) This frequent reference to the "third day," suggests the question,—

WERE THE DISCIPLES ABLE TO COUNT THREE?

for they have located for us this "third" day. The two disciples on their way to Emmaus after the resurrection of Christ (Luke 24:21), said "To-day is the third day since these things were done." And this day is particularly specified as "the first day of the week." (Verses 1, 13.) Here we have a plain and immovable waymark to guide us in our reckoning; the first day of the week was *the third day,*— a remark evidently brought in here with design to identify the fulfillment of the numerous predictions that He should rise on the third day.

But from what events did they commence their enumeration? How much was embraced in "these things?" Verse 20 answers. After stating what kind of person Jesus of Nazareth was, a prophet mighty in word and deed, they begin the enumeration of the "things" to which they refer. They say, "And how the chief priests and our rulers delivered Him to be condemned to death, and have crucified Him. But we trusted that it had been He which should have redeemed Israel, and besides all this, to-day is the third day since these things were done."

"These things" certainly *include the trial of Christ as well as the crucifixion;* and the first day of the week was the third day since this work commenced. Let us then count back and find the beginning. If the first day of the week was the *third* day since these things were done, the day preceding, or Sabbath, was the *second,* and the day before that, or Friday, was the *first.* But if, on account of the word "since," any

say that we must go back further still, we can go back only another day, which would carry us to Thursday; and this is as far as it is possible to go; and that too, for the trial of Christ, and not merely for His crucifixion.

This circumstance and this positive declaration of the disciples, evidently staggers Mr. Wardner in his argument. He meets it by saying: "Is it proper to make an incidental remark of an *uninspired* man, outweigh and set aside a carefully written statement of an *inspired* penman?" This raises again our question, "Were the disciples able to count three?" We do not imagine it would require a great deal of "*inspiration*" to enable the disciples, under their circumstances, to keep the count, of three or four days at least, after the crucifixion; and we believe they stated it with exact correctness, and Christ did not accuse them of wrong reckoning. No inspired writer, as we shall see, has prepared any carefully written statement which contradicts this.

Not quite satisfied to leave it on that ground, Mr. W. hunts around to find some "prominent item" from which they might have reckoned, and fixes upon the setting of the watch at the sepulcher, as the great desideratum. He says: "Hence the setting of that watch would naturally be a prominent item among '*all these things*' that they were talking over; and this was the third day after it"!!

How much weight this is entitled to, may be estimated by reading again the words of the disciples to Christ, who say *not one word* about the setting of the watch, but dwell upon the trial and the crucifixion. A position which drives its adherents to such make-shifts as to try to discredit the statement of the disciples because they were not *inspired* (as if they could not keep track of time for three days), and then set up an artificial starting-point from which to reckon, of which the dis-

ciples make no mention whatever, sufficiently betrays its inherent weakness.

We have two notable instances which show us how both Christ and the apostles reckoned "the third day." When it was feared that Herod was plotting the destruction of Jesus, and He was desired to depart out of Herod's jurisdiction, He made reply: "Go ye, and tell that fox, Behold, I cast out devils, and I do cures to-day and to-morrow, and the third day I shall be perfected." (Luke 13: 32.) Here the day then current when the conversation was held, though a portion of it had of course passed, was counted as *one*, the morrow as *two*, and the third day after the morrow, as *three*.

Again in Acts 27: 18, 19, Paul, in giving an account of his shipwreck, says: "And we being exceedingly tossed with a tempest, the next day they lightened the ship; and the third day we cast out with our own hands the tackling of the ship." Here, also, the day on which the event first mentioned occurred, is reckoned as the first, the day following as the second, and the next the third.

Applying the same rule to the time of Christ's death and resurrection, we have the day on which the events first spoken of occurred, the trial and crucifixion of Christ, as the first day of the series; the day which He passed in the tomb as the second day; and the day on which He arose and appeared to His disciples, the third day. And such a period the people of that time were accustomed to speak of as "three days," "after three days," "the third day," "three days, night or day," "three days and three nights," as is clearly shown by the passages already referred to. Elder W. may, if he chooses, call the method by which Christ and His apostles reckoned time, "loose interpretations." We do not so regard it. But whether

it was not, our duty is to follow the same rule when interpreting their words.

A portion of our first proposition (namely, that the view that Christ was crucfiied on Wednesday and arose on the Sabbath, rests on assumption) is now proved. The claim that the expression, "three days and three nights," means just seventy-two hours, no more, no less, is an assumption. It cannot be proved. All the evidence goes to show that it means, or at least may mean, a less period than that; for the use of equivalent expressions in the Scriptures, demonstrates that it was the custom of Bible writers to use the phrase "three days and three nights" to signify a period less than seventy-two hours; and the fact that they so used it, utterly destroys it as proof that Christ must lie in the tomb just seventy-two hours.

The other leg of the seventy-two hour theory, namely, that the expression, "heart of the earth," means the grave, is an equally unwarranted assumption. If it does not mean that, then the structure built upon their main proof text (Matt. 12:40) suffers an utter collapse. If "three days and three nights" do not mean seventy-two hours, as we have shown that they do not, and "heart of the earth" does not mean the grave, as we will show that it does not, what ground is left for the seventy-two hour theory? — None at all. But we ask, Where is the proof that "heart of the earth" means "grave"? We have, time and again, called for proof on this point, but have never yet succeeded in securing any response. We have carefully searched through a dozen arguments on that side of the question, and not the first attempt do we find to prove that "heart of the earth" means the "grave." The quiet assurance with which all these writers take this point for granted, the imperturbable indifference and obliviousness with which they pass it by, is astonishing. What can be said to

awaken in their minds the idea that here is a point that must be *proved*, before their theory will stand?

The expression "the heart of the earth," has no more reference to the grave, than it has to the moon.

The word "heart" primarily means the organ by which the circulation of the blood is kept up in the body. Of course it is not here used in that sense; nor is it used in its secondary sense of the "seat of the affections;" nor yet in its third meaning, as "the part nearest the center," as the "heart of a tree," the "heart of a country," etc.; for Christ was not buried in the center of the earth. Evidently the sense in which it is used is a figurative one; but what is there about the grave to make such a figure appropriate, as applied to it?—Nothing whatever. But if the heart of the earth does not mean the grave, then, even if three days and three nights mean absolutely seventy-two hours, it is not proved that Christ was to lie in the tomb that length of time. These are the two main pillars of the seventy-two hour theory; and both of these are assumptions.

That this view has been adopted by the few who entertain it, with a good motive, we have no question. It has seemed to them a masterly stroke of policy to destroy the Sunday error at one blow. They say, "If the principal and fundamental premise of Sunday-keepers—'Jesus rose on Sunday'—appears uncertain, or is false, then all arguments, premises and conclusions of Sunday advocates are ruined at once. It supersedes the necessity, on our part, of following them through all their arguments of assumption, etc., and compels them to acknowledge that the weapon they hold in their hand is only an illusion."

This would be true only on one condition, and that is, that the Sunday-keeper would *acknowledge that the position of*

the Sabbath-keeper was correct, that Christ did not rise on Sunday. But this is just what *he will not do* and what the Sabbath-keeper *cannot prove.* Then, what advantage is gained?

Let us imagine an attempt to meet a Sunday-keeper on this ground. The Sunday-keeper says, "I keep Sunday because the Lord arose from the dead on that day." The Sabbath-keeper replies that he is wrong to keep it for that reason, because Christ did not arise from the dead on that day. He must have arisen the evening before the first day; for He was put in the tomb near the close of some day, and was to remain in the heart of the earth three days and three nights, just seventy-two hours, hence His resurrection must have taken place at about the close of the Sabbath, and not on Sunday at all. And His crucifixion was on the preceding Wednesday. The Sunday-keeper asks him to prove that the phrase "three days and three nights" means just seventy-two hours, confining the resurrection to the close of the day; and that the "heart of the earth" means the "grave."

By raising these questions, the point of the controversy is at once shifted from the Sabbath question proper to that of the time of Christ's resurrection. And giving it such a turn is a virtual confession that the resurrection of Christ has a decisive bearing on the question as to which day is the Sabbath; but this is wholly untrue; it has no bearing on the Sabbath question whatever; the Sabbath-keeper takes upon himself propositions which it is impossible for him to prove, and the vantage ground every way is given to the Sunday-keeper. Such is the position a person puts himself in, who undertakes to work the Sunday question on this line of argument. The Sunday-keeper retires from the field triumphant, confirmed in his conviction that the resurrection of Christ determines the day of the Sabbath, and that that day is Sunday. It must,

therefore, inevitably prove a damage, rather than a help, to the Sabbath cause. This is the second indictment we hold against this view.

We believe it is acknowledged to be a sound principle in all discussions, to go as far as possible with an opponent, reducing the issue to as small a compass and as few particulars as practicable; for in this way can questions be the soonest and most satisfactorily settled. But the seventy-two-hour theory enlarges, rather than contracts, the field of discussion, and that, too, on an issue for which there is no foundation whatever. When the Sunday-keeper claims the first-day institution on the fact of Christ's resurrection upon that day, grant him his supposed fact, even if only for the sake of the argument; and then show him that though this was the case, it has not the remotest bearing on the question of which day is the Sabbath, and affords no ground whatever for the observance of the first day of the week. And this can be done *a thousandfold more easily* than the average Sunday-keeper can be convinced that Christ did not rise on the first day of the week, and the desired object would be as fully gained by this method as by the other. Under these circumstances, why take the impossible side?

Before proceeding to the direct testimony of the Scriptures on the subject before us, a few thoughts concerning that peculiar phrase, "the heart of the earth," will be in order. We have already noticed some things to which it cannot refer. Let us now consider what it may mean. It is here to be carefully borne in mind that the comparison is between the experience of Jonah and that of Christ. Jonah was for a time in a condition that illustrated a condition which Christ would for a time be in. And what part of Jonah's experience is taken?— The time when he was inside the great fish by which he was swallowed. His condition then represented Christ "in the

heart of the earth." The point of inquiry then is, What, in Jonah's case, corresponded to "the heart of the earth" in Christ's case? The answer is, The living fish which had *actively taken Jonah into its own power*, and under whose control he was till he was cast forth upon the dry land. Jonah was not in the bottom of the sea, nor laid in some submarine cavern, nor in dead earth anywhere, but was in a living monster which bore him whithersoever he would. So when Christ was in a corresponding condition "in the heart of the earth," we must look for Him not merely in the embrace of the lifeless grave, the inert tomb, but under the dominion of some living power. We must not do violence to the comparison; the living fish is no fit symbol of the grave. But it will be asked, Does not Christ refer to the time He would be in the grave? That time is of course included; but that is not the condition to which He specially referred. He was not in the heart of the earth because He was in the grave; but He was in the grave incidentally, because He was in the heart of the earth; that is, He was under the control of a power which put Him in the grave—a power corresponding to the living fish which swallowed Jonah.

It will be conceded by all that the expression "the heart of the earth," is a figurative one, because there is no literal sense in which the application can be made. Now, taken figuratively, in what sense is the word "earth" most frequently used in the Scriptures?—It is used in such a sense to represent the inhabitants of the earth. It is so used in Rev. 12:16: "And the earth helped the woman;" also in Isa. 1:2: "Give ear, O earth;" and in Jer. 22:29: "O earth, earth, earth, hear the word of the Lord." Here the word is used to denote the wicked inhabitants of the earth. Satan is the god of the world, the head of its prevailing multitudes, who constitute the children of the

wicked one. Into the hands of these the Son of man was to be for a time delivered. Christ often makes a special point of this: "The Son of man shall be betrayed into the hands of men." (Matt. 17:22.) "The Son of man is betrayed into the hands of sinners." (Matt. 26:45.) And this is what we understand He meant by declaring that He should be "in the heart of the earth;" that is, under the full control and power of wicked men and devils, so that they could accomplish the evil desires of their hearts concerning Him. And when He was thus delivered over to them, He declared plainly, "*This is your hour, and the power of darkness.*" Luke 22:53.

In nine instances where it is declared that He will rise on the third day, the betrayal, trial, and crucifixion are specified as included in the events to occur during the three days; and from the first of these, and not from the burial, the period is to be reckoned. Thus:

Matt. 16:21: "From that time forth began Jesus to show unto His disciples, how that He must go unto Jerusalem, and suffer many things of the elders and chief priests and scribes, and be killed, and be raised again the third day."

Matt. 17:22, 23: "The Son of man shall be betrayed into the hands of men: and they shall kill Him, and the third day He shall be raised again."

Matt. 20:18, 19: "The Son of man shall be betrayed unto the chief priests and unto the scribes, and they shall condemn Him to death, and shall deliver Him to the Gentiles to mock and to scourge, and to crucify Him: and the third day He shall rise again."

Mark 9:31: "The Son of man is delivered into the hands of men, and they shall kill Him; and after that He is killed, He shall rise the third day."

Mark 10:33, 34: The Son of man shall be delivered unto the chief priests, and unto the scribes; and they shall condemn Him to death, and shall deliver Him to the Gentiles: and they

shall mock Him, and shall scourge Him, and shall spit upon Him, and shall kill Him; and the third day He shall rise again."

Luke 18:32, 33: "For He shall be delivered unto the Gentiles, and shall be mocked, and spitefully entreated, and spitted on; and they shall scourge Him and put Him to death; and the third day He shall rise again."

Luke 24:7: "The Son of man must be delivered into the hands of sinful men, and be crucified, and the third day rise again."

Luke 24:20, 21: "And how the chief priests and our rulers delivered Him to be condemned to death, and have crucified Him. But we trusted it had been He which should have redeemed Israel: and besides all this, to-day is the third day since these things were done."

Luke 24:46: "Thus it behooved Christ to suffer, and to rise from the dead the third day."

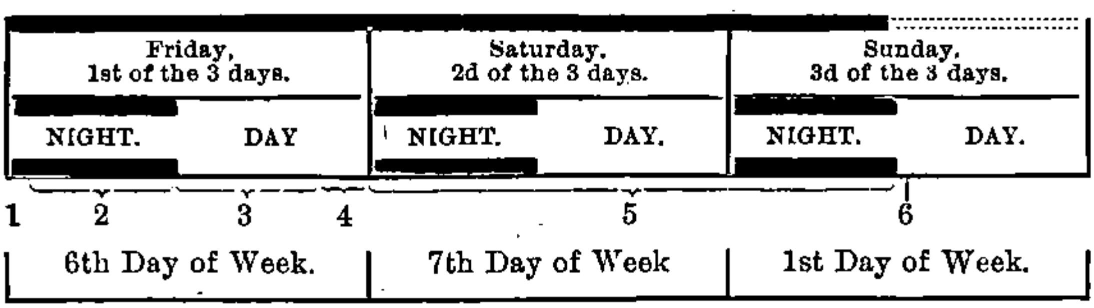
In all these scriptures it will be noticed that His being given over into the "hands of men," "the hands of the Gentiles," "and the hands of sinners," is made equally prominent with the other events; and the trial and condemnation and crucifixion are inseparably connected with the resurrection, as coming within the three days. During all this time He was "in the heart of the earth"—that is, under the dominion of sinful men. This idea corresponds much better with the case of Jonah. He was in the stomach of the fish, under the control of a *living* monster, not buried in dead earth; so Christ was under the domination of living men and devils. He was no more in the heart of the earth when in the grave, than He was when hanging on the cross; no more in the heart of the earth when in the tomb, than He was when the mob had secured actual control over Him, after His betrayal by Judas.

Reckoning from this standpoint, how much time have we? Near the close of the day on Thursday He prepared to

eat the passover with His disciples. The evening following (Thursday night as we would now call it; Friday, or sixth day, night as it was then), Judas and his mob came out with torches, and swords, and staves, and He was betrayed into their hands. All that night and the next day till the third hour, was occupied with the trial; from the third to the ninth hour, with the crucifixion. From about the ninth hour to the beginning of the seventh day, the burial was attended to. All that night, the day following, and the succeeding night were passed by Him in the tomb. Early on the morning of the first day of the week, He arose. This gives us three full nights, two full days, and a portion of the third day, making it strictly true that *on the third* day He arose. The following diagram will illustrate these points:

Christ Delivered into the Hands of Wicked Men.

"YOUR HOUR AND THE POWER OF DARKNESS."



Explanation.—First, The figure "1" marks the betrayal, near the beginning of the sixth day of the week. Second, The figure "2" marks the trial, to the third hour of the daylight part of the same day. Third, The figure "3" marks the crucifixion, from the third to the ninth hour of the sixth day. Fourth, The figure "4" marks the burial, between the ninth hour and the close of day. Fifth, The figure "5" marks the rest in the tomb during the night and day of the seventh day, and the night of the first day. Sixth, The figure "6" marks the resurrection, early the first day of the week. Mark 16:9.

When Christ said to the chief priests and captains of the temple, who had come out to take Him, "THIS IS YOUR HOUR AND THE POWER OF DARKNESS" (Luke 22:52, 53), He set apart a peculiar period in His experience during which He was in the hands of men. This was the time when He was "in the heart

of the earth." It began with His betrayal, at the beginning of the sixth day, and ended with the resurrection on the morning of the first day of the week. Thus it will be seen that all was in strict accordance with the Jewish manner of reckoning time, as in Gen. 42: 17, 18; 2 Chron. 10: 5, 12; Esther 4: 16; 5: 1; and with the manner in which both Christ and Paul reckoned the third day (Luke 13: 31, 32; Acts 27: 18, 19); and with Christ's repeated declarations that *on* the third day after His betrayal into the hands of men, followed by His suffering and death, He would rise again.

It has been shown, in opposition to the seventy-two-hour theory, that the expression "three days and three nights" does not necessarily mean seventy-two hours, and that the expression, "the heart of the earth," does not mean the grave. The principal proof text, therefore (Matt. 12: 40), which is relied upon to prove that Christ was crucified Wednesday and rose on the Sabbath, utterly fails, in every way, to sustain that proposition.

It has also been shown that as the expression, "the heart of the earth," is used in that text in a figurative sense, the most natural application is to consider it as simply denoting the dominion of wicked men, to which Christ was for a time subjected, beginning with His betrayal, Thursday evening, and ending with that auspicious hour when the guards who were watching Him in the tomb, were struck to the earth as dead men by the power of His resurrection, on the morning of the first day of the week.

The time covered by this application reaches to the middle of the third day (using the word "day" here in its broadest sense) from the time these things began to transpire; or, dividing the time into its dark and light parts, it gives us two full days and three full nights, to the growing dawn of the

third day, answering completely to the manner in which the Hebrews reckoned time, according to the examples given us in the Scriptures. See again the foregoing diagram.

It now remains to look at the direct testimony of the evangelists upon these points.

It is claimed that Matt. 28: 1 positively affirms that Christ rose on the Sabbath. The common version reads: "In the end of the Sabbath, as it began to dawn toward the first day of the week." The Greek reads, "*Ospe de sabbaton te epiphoskouse eis mian sabbaton.*" The Revised Version reads, "Now, late on the Sabbath day, as it began to dawn toward the first day of the week." The subsequent narrative states that Mary Magdalene and the other Mary, coming at this time to the sepulcher, found that the Lord had arisen; and if this visit was made before the close of the Sabbath, of course the resurrection of Christ occurred upon that day.

The argument on this point is made to turn on the little Greek word "*opse.*" This, it is claimed, always means "late," and never "after," hence the passage cannot mean "after the Sabbath." Thus Mr. Wardner, in his tract to which reference has been made (p. 7), says:

"Matt. 28:1 says: 'Late on the Sabbath day He was risen.' Here the Greek '*opse*' is used to represent the closing moments of the Sabbath. It literally means 'late,' and when used with '*hemera*' (day), means late in the day. See Liddell and Scott. '*Opse*' is invariably used in Scripture to represent '*evening*,' and '*proi*' to represent '*morning*,' and they *are never used interchangeably.*"

He then refers, in proof of this last statement, to Mark 11: 19, 20; 13: 35; and to the Septuagint of Gen. 24: 11; Ex. 30, 7, 8, and Isa. 5: 11. But in these references he seems to have overlooked the fact that in all these instances the construction

in which the word is used is not like that in Matt. 28: 1; and he has thus attempted the unscholarly feat of determining the meaning of "*opse*," in one construction, by its definition in another and altogether different construction. Matt. 28: 1 is peculiar; the word is there used with the genitive case, and no other instance of the kind occurs in the New Testament. Mr. W. notices this and says: "'*Opse*' with a substantive in the genitive case, as in Matt. 28: 1, always means late in the period spoken of, and never means '*after!*'"

For so sweeping a statement, this is very positive, and ought to have been backed up by competent evidence other than the bare assertion of the affirmant. Let us see what others have to say upon this point.

Robinson, in his Greek lexicon of the New Testament, gives the following as the definition of the word "*opse*" when used with a genitive:

"2. With a genitive, *i. q.*, *at the end of, at the close of, after.* (Matt. 28: 1,) *opse de sabbaton,* .... at the end of the Sabbath, *i. e.*, after the Sabbath, the Sabbath being now ended, *i. q.*, (Mark 16: 1, (*diagenomenou tou sabbaton.* For the genitive, see Buttm., §132, 5. b."

In his note on Matt. 28: 1, Dr. Clarke says:

"In the end of the Sabbath] *opse de sabbaton.* After the end of the week; this is the translation given by several eminent critics; and in this way the word "*opse*" is used by the most eminent Greek writers. (Thucydides, lib. 4, chap. 93,) *tes hemeras opse en*—the day was *ended.* Plutarch, *opse ton basileos chronon*—*after* the times of the kings. Philostratus, *opse ton Troikon*—*after* the Trojan war. See Rosenmuller.

Bloomfield's Greek Testament, on Matt. 28: 1, says:

"*Opse de Sabb.*] This must, with Krebs, Wahl, Tittm., Kuin., and Fritz, be explained, 'after the Sabbath,' *i. e.*, as Mark

more clearly expresses it, *diagenomenou tou sabbatou* (the Sabbath being passed) which must determine the sense here. Of this signification the commentators adduce examples from Philostratus, Plutarch, Ælian, and Xenophon."

Olshausen on Matt. 28: 1 says:

"As respects first the fixing of dates, the expression *'diagenomenou tou sabbatou'* in (Mark 16: 1) serves to explain the *opse sabbaton* in Matthew. For instance, *sabbaton*=(Heb.) *shabbath,* also in the plural (*ta sabbata*), was used for the one day of Sabbath. (Compare the Septuagint version of Ex. 20: 10, and Lev. 23: 32.) *'Opse'* is, however, used in the sense of *'after.'* It occurs, indeed, in the New Testament only here; but it occurs also in this signification in profane writers. (Compare Philostratus, Vit. Apoll. 4 18,) *opse musterion 'after* the mysteries.' Thucyd. 4, 93. Ælian V. H. 2, 23."

These authorities will speak particularly of the use of *"opse"* with a genitive, as in Matt. 28: 1; and they say that in such constructions it has the meaning of "at the close of, *after;"* and they refer to the works of old standard Greek writers, as Philostratus, Plutarch, Ælian, and Xenophon, as evidence that the word can be used in such a sense. In view of these facts, what becomes of Mr. W.'s assertion that *"opse,"* with a substantive in the genitive case, as in Matt. 28: 1, always means late in the period spoken of, and never means *"after"?* Does he know better how the Greek language should be used than did Plutarch or Xenophon?

But it may be said that Liddell and Scott do not give this definition to the word; and we may add, neither do the lexicons of Donnegan and Parkhurst. But they do not say that it cannot have this meaning; and the only inference is that in giving their definitions, they did not make them broad enough to cover all the uses of the word as it actually appears in Greek writers. Greenfield and Bagster both define "*'opse sabbaton,'* after the close of the Sabbath. Matt. 28: 1."

Another word in the sentence confirms the view that it applies to a time when the Sabbath was passed. That word is "*epiphoskouse*," from "*epiphosko*," translated, "as it began to dawn." The root of this word is "*phos*," which means "light." The light of the sun and the light of the day, is, of course, the leading idea contained in the word. The verb "*epiphosko*," signifies the transition from darkness to daylight. It applies, primarily, therefore, to the morning. Liddell and Scott give it this one definition, "to grow toward daylight." Other lexicographers, in addition to this, give it a tropical meaning, signifying the "commencement" of the day, at whatever time that might be reckoned. The Jews reckoned the day as beginning at sunset. Hence the word is once applied to the day so beginning, as in Luke 23: 54: "The Sabbath *drew on*." And this text and Matt. 28: 1, are the only instances where the word is used in the New Testament.

Its use in Luke 23: 54, to denote the coming on of the Sabbath, which began at sunset, is easily accounted for. As the word "day" is ordinarily applied to the light part of the twenty-four hours, and as the word "*epiphosko*" signifies the commencement, or opening of that part, it would naturally come to be used, under a figurative meaning, of the commencement of the day in its broader sense, whether that day began at sunset, as with the Jews, or at midnight, as with the Romans. But of course the primary sense should be given it wherever possible. The seventy-two-hour theorists think they have a straight reading when they render "*opse*" "late," and read it, "Late on the Sabbath, as the first day drew on." But we take our stand a few hours later, translate "*opse*" "after," as it means when used, as here, with the genitive, and give "*epiphoskouse*" its *primary* signification; and then we have, "*After* the Sabbath, as it *began to grow toward daylight* on the first day

of the week." This is a less forced reading than the other, and agrees with Greek usage and with the records of the other evangelists, as we shall see.

The reader did not fail to notice the testimony of Robinson, Bloomfield, and Olshausen; that the testmony of Mark 16:1 is parallel with that of Matt. 28:1; and that the explicit and definite statement given by Mark must determine the sense of the passage in Matthew. But Mark says directly:

"And when the Sabbath *was past*, Mary Magdalene and Mary the mother of James, and Salome, had bought sweet spices, that they might come and anoint Him. And very early in the morning, the first day of the week, they came unto the sepulcher at the rising of the sun."

Our friends endeavor to get over this passage by claiming that the visit to the sepulcher recorded by Matthew was not the same as the one here recorded by Mark. Matthew, they say, speaks of a visit at the close of the Sabbath, and Mark of a visit the next morning, the first day of the week. But all are obliged to admit that the same individuals are spoken of in both records. Thus Matthew says that Mary Magdalene and the other Mary came to see the sepulcher.

"And, behold, there was [margin, *had been*] a great earthquake; for the angel of the Lord descended from heaven, and came and rolled back the stone from the door, and sat upon it."

Mark says that Mary Magdalene, and Mary the mother of James (the same Marys that Matthew speaks of), and Salome, came early on the first day of the week, and, intending to anoint Him, queried among themselves who should roll the stone away from the door of the sepulcher for them. Now, if this was a subsequent visit to that recorded in Matthew, we have a tremendous absurdity to wrestle with: we have to ex-

plain how the two Marys could go to the sepulcher before the close of the Sabbath, late Sabbath afternoon, in broad daylight, find the stone rolled away and the sepulcher empty, meet an angel who expressly says to them, He is not here; for He has risen, and tells them to go and make it known to the disciples; and then as they return, meet Jesus, receive His welcome, All hail! and hold Him by the feet and worship Him; and then, after passing through this thrilling experience, go back stupidly to the sepulcher the next morning, expecting to find Jesus there, and to enbalm His body, and wondering who would roll the stone away for them!

Mr. Wardner endeavors to surmount this difficulty in the following unique style. After referring to the unbelief of the disciples in regard to the resurrection of Christ, he says:

"Now if the combined testimony of Peter and John and the two brethren who went to Emmaus and the personal demonstrations of Christ Himself in their presence, could not convince those apostles that what they themselves saw and handled was anything but a spirit, until Christ ate before them, is it strange that Mary Magdalene should, by them, be made to doubt the literal reality of what she saw and heard on her first visit to the tomb? She probably had no more idea that He was to rise from the dead than they had, and was as much inclined to believe in spirit manifestations and visions as they; and when they all united in scouting the reality of what she had reported, and insisted that it was simply a vision, she would naturally doubt her own senses, as they doubted theirs, and hence her visit to the tomb, the next morning, while yet dark (John 20: 1), to satisfy herself whether or not it was a reality."

Now we submit that this explanation is a little hard on those good women. If some of the brethren were "fools, and slow of heart to believe," it is no reason why the same state of mind should be charged upon the sisters. And there is not a hint in all the record that *any of the women ever dis-*

believed, after they had seen Him, or the fact of his resurrection had been announced to them. Neither did the brethren disbelieve after they had seen Him. It was only before they had had a chance to settle the question by the evidence of their own senses, that they doubted; but when they had seen Him (as it is claimed the Marys saw Him at the close of the Sabbath), that settled the matter, and they were then ready to exclaim, "The Lord is risen, indeed!" (Luke 24:34.) There is only one text which has any semblance of opposition to this view; and that is Luke 24:41: "And while they yet believed not for joy." But this does not imply any settled unbelief, but only that they felt that what they saw before them, was, as we sometimes express it at the present time, "too good to be true." Under these circumstances, to represent Mary Magdalene as being reasoned out of her own senses, or as being persauded to believe that God (or the devil?—which?) had given her a spirit manifestation, setting forth what was not true; and on the strength of it, she had been telling the brethren a lie, that the Lord was risen when He was not — it is too preposterous for a moment's credence.

Two other absurdities are involved in the view that the narrative of Matthew 28, antedates that of the other evangelists, he recording what took place at the close of the Sabbath, and they, what occurred the following morning. These absurdities are:

1. When Jesus arose, some of the watch immediately hastened to the chief priests, and told them what had occurred. (Matt. 28:11.) The priests advised them to account for the absence of Jesus from the tomb (first discovered at the close of the day Sabbath, remember) by saying that the disciples came by night, and stole Him away while they slept. (Verse 13.) "Came *by night.*" That must have been, then, the night be-

fore, and they were then asleep, and hadn't waked up enough to discover that the body was gone till the close of the following day! No wonder they were afraid their heads would come off over such a story! A position involving the narrative in such an absurdity will never answer.

2. According to this position, the two Marys (of whom Mary Magdalene was one) met the risen Saviour at the close of the Sabbath, and held Him by the feet and worshiped Him. (Matt. 28: 9.) But Mary Magdalene, according to John (20:1–17), met the Saviour on the morning of the first day of the week; and as she was about to worship Him, He said to her, "Touch me not, for I am not yet ascended to my Father." Now it is absurd to suppose that He would permit her, at the close of the Sabbath (as it is claimed that Matthew declares), to hold Him by the feet and worship Him; and yet the next morning, as John testifies, refuse to permit her to touch Him, because He had not yet ascended to His Father.

The language employed by Matthew in verse 1, is entirely in harmony with the idea that the Sabbath was fully past when the events which he records took place, and some, at least, of the circumstances were such that it is utterly absurd to suppose they could have transpired before the close of the Sabbath.

But it is said that Matthew's record does not agree with that of the other evangelists, in that he states a number of particulars which they do not mention; and therefore he must refer to a different visit to the sepulcher, from the ones which the others record.

But this does not by any means follow. Several witnesses may describe the same scene, and neither of them record what the others mention; yet, it cannot be said that there is any discrepancy or disagreement between them, unless what one says would make it impossible that what the others say could be

true. And this is recognized as a legitimate principle harmonizing the records of the evangelists. One writer may state particulars not mentioned by another; but that does not discredit his own testimony, nor prove the other untrue. Thus Matthew (chap. 28: 1) says that the two Marys came to the sepulcher. Mark (chap. 16: 1) says that Salome was with them. But the fact that Matthew did not see fit to mention her name, does not prove that she could not have been there at the time that he speaks of, and therefore does not prove that Matthew must have referred to a different occasion from that recorded by Mark. So Matthew speaks of the earthquake which had taken place before the Marys reached the sepulcher, the descent of the angel, the prostration of the soldiers who were guarding the tomb, their report to the priests, and the story which the latter invented to try to cover up the truth. But there is nothing in the records of the other evangelists to show that any or all these things might not have happened in close connection with what they relate, they simply choosing to dwell upon other particulars. Nothing further need be said on this point.

We now come to what we offer as positive testimony that Christ did rise upon the first day of the week. It is the testimony of Mark 16: 9:

"Now when Jesus was risen early on the first day of the week, He appeared first to Mary Magdalene, out of whom He had cast seven devils."

On this point Mr. Wardner remarks:

"Mark (16: 9) is quoted to prove that Christ rose on first-day morning; but he says no such thing. He says that Christ '*was risen*' at that time, without intimating when He rose."

We suppose he is aware that the word "risen" is simply the second aorist participle, and would be properly rendered

"Now Jesus *having risen,*" instead of "Now when Jesus *was risen.*" His position here reminds us of that of the Sunday Sabbatarian on Acts 20: 7. That text reads, "And upon the first day of the week *when* the disciples came together to break bread," etc. Here, says the Sunday-keeper, the expression, "*when* they came together," denotes repeated and customary action. But, we reply, the Greek has simply the noun and its participle—"the disciples have come together"—denoting only an incidental meeting.

The construction of Mark 16: 9 is similar; and if we read it, "Now Jesus having risen early the first day of the week," there would hardly seem to be any room to question the meaning of the passage. Such *is* the reading; and such *we believe* to be the plain intent of the passage; namely, to declare explicitly that Jesus rose on the first day of the week; and no criticism that we have yet seen seems sufficient to overthrow it. Meyer, to be sure, endeavors to throw the passage away by making it apocryphal. He argues that the latter part of Mark 16, beginning with verse 9, is an interpolation by some other person, and was not written by Mark. But this is sufficiently refuted by Lange, on the authority of the great majority of eminent critics, who consider this portion of Mark's Gospel as genuine as any other part of it.

In regard to the construction of verse 9, Meyer declares that it is impossible to tell whether the adverb "*proi*" (early) qualifies the participle "*anastas*" (having risen) or the verb "*ephane*" (appeared) as found in the sentence, "he *appeared* first to Mary Magdalene." This being so, and the construction admitting of *either* application, we are thrown back upon the *sense* of the whole passage to determine which it is. The adverb certainly qualifies one of those words, and it does not qualify them both. We must give it that application which

will make the apostle's statement most consistent and reasonable; and that will be the correct one.

We have, then, before us on this point, two positions: one class hold that the adverb qualifies "appeared;" and they would read the passage thus: "Now when Jesus was risen [some time in the past], He appeared early the first day of the week to Mary Magdalene first." This is the position of those who deny that Christ rose on the first day of the week. Thus Mr. Wardner says:

"Mark's statement is explained by what John says (chap. 20: 1-18), who describes a second visit of Mary Magdalene in the morning while yet dark, to whom Christ again appeared, before He did to anyone else that day."

The other position is that the adverb "early" qualifies the participle "having risen;" and those who hold this view would read the passage substantially as it is in our common version. "Now, Jesus having risen early the first day of the week, He appeared first to Mary Magdalene;" not merely first on that early portion of the first day of the week, but first after His resurrection; that is, He rose early on the first day of the week, and first showed Himself, after His resurrection, to Mary Magdalene.

Now which of these is the more consistent view? The answer to this question we are willing to leave to the candid judgment of any reader who will give the subject a little careful thought. We can easily see that some importance attaches to the fact of Christ's first appearance, and that there is some reason why it should be expressly revealed to whom He first appeared. But where is there the least shadow of reason for stating to whom He appeared first on some particular portion of the day, as the early part of the first day of the week, especially since it is claimed that He had already appeared to the

same party the evening before! If it is so important a matter to tell to whom He appeared first, on the different divisions of the day, why does not the record state to whom He appeared first at the third or sixth or ninth hours of the day? It would be just as important to know these facts as the one which, it is claimed, is so particularly revealed.

We are referred to John 20, in explanation of Mark 16:9. But let us see how John's record will compare with the interpretation given to Matthew 28, by the seventy-two-hour theorists. John says that Mary Magdalene came early the first day of the week to the sepulcher, and saw the stone taken away. She hastened back to Peter and John, and said unto them, "They have taken the Lord away out of the sepulcher, and we know not where they have laid Him." This is evidently the first intimation that Peter and John or any of the disciples had had of the matter. So Peter and John ran to the sepulcher. But she, it is claimed, had been to the sepulcher the night before (according to Matthew's account), and found the stone rolled away, and had seen an angel, who told her plainly that the Lord had risen, and then had met Jesus Himself and recognized Him, and held Him by the feet and *worshiped Him*, knowing of course that He was the Lord; and yet, going to the sepulcher the next morning, and seeing the stone taken away, she runs and reports that someone has stolen the Lord out of the sepulcher, and she does not know where they have laid Him! Mr. Wardner claims, as before noticed, that Mary Magdalene went to the sepulcher on first-day morning, expecting to find Christ there, because the disciples had reasoned her out of her own senses respecting her visit to the sepulcher and her interview with the angel and Christ the night before. But it appears from this record in John that she, strangely, had said not a word to the disciples about the wonderful scenes of

the night before; and the first announcement she made to them was, when she saw the stone taken away the next morning, that some one had stolen the Lord out of the sepulcher! So she had not been reasoned with at all on the subject, and we must attribute her singular conduct to her own obliviousness. Strange that she should have forgotten that she had seen the stone rolled away the night before; had seen and talked with an angel; had met the Saviour and held Him by the feet and worshiped Him! If this is so, although Christ had cast seven devils out of her, there was still another left — a remarkable imp of forgetfulness! But we will not defame the fair memory of the devoted Mary, by any such unsupposable supposition.

The record in John 20, does indeed agree with Mark 16:9. It shows that Mary Magdalene had not seen Him before the first day of the week, and that she was the first one who did see Him; and at that first revelation He could permit no one to touch Him, because He had not then ascended to His Father. But in His then resumed, exalted, immortal nature, He could go and return more quickly than the angels, whose movements seemed to the prophet like a flash of lightning (Eze. 1:14); and we may suppose that He ascended to His Father, to receive His approval of His sacrifice, and was almost immediately again present on earth to receive the worship of the women (Matt. 28:9), who could now approach Him freely, to show Himself to all the other disciples, and to talk to them more fully "of the things pertaining to the kingdom of God." (Acts 1:3.) And as we go back in imagination to that first-day morning, and consider what a morning it was to them of multiplying wonders, and joyful surprises; how they must have gone many times back and forth, singly and in groups, to the sepulcher, and iterated and reiterated to each other the wonderful tale, while they could scarcely believe their own senses,— it is easy

to account for all the evangelists have written, and find a place for all which they have individually and collectively described, and even more. And it is certain that Mark declares that the rising of Jesus from the tomb was early on the first day of the week. Any other construction spoils the sense of the narrative.

A few other statements demand a word of notice in this connection. John, in chapter 19:31, says: "The Jews, therefore, because it was the preparation, that the bodies should not remain upon the cross on the Sabbath day (for that Sabbath day was an high day), besought Pilate that their legs might be broken, and that they might be taken away." [The Solar, Lunar, and Passover Sabbaths would come together once in seventy-seven years, and according to the cycles of weeks and Lunar time that was observed by the Hebrews, the time had arrived for this celebration of their threefold Sabbath.]

From this we learn that the day following that upon which the Saviour died, was a Sabbath, and an "high day," or great day (Gr. *megale hemera*). Those who place the crucifixion of Christ on Wednesday, have this Sabbath come on Thursday, and consist exclusively of the passover Sabbath. But there was nothing connected with any passover sabbath alone, to entitle it to that designation. Among the annual sabbaths, the day of atonement was the leading day, not the passover. But if the passover sabbath and the weekly Sabbath then came together on the same day, that fact would bring all the ceremonies of the passover sabbath, and the extra sacrifices and services of the weekly Sabbath together, and make the day a great day. On no other supposition than that they did thus come together at this time, can that expression be accounted for. This would make Friday to be the day of crucifixion, and the day following, that is, the weekly Sabbath, to be the passover sabbath also.

The day of the crucifixion is in several instances called the day of "the preparation," and generally the "preparation of the Sabbath," (Luke 23: 54.) "And that day was the preparation, and the Sabbath drew on." The women then saw how the body was laid, and (verse 56) "returued, and prepared spices and ointments; and rested the Sabbath day according to the commandment." What Sabbath?—Evidently the one which followed the "preparation" in verse 54, and which was "drawing on," when they took the Saviour down from the cross. Now, if we apply this to the passover sabbath, we must surrender verse 56 as applying to the weekly Sabbath, which is one of the best texts for the perpetuity of the fourth commandment, in all the New Testament. It is surprising that any Sabbath-keeper should be willing to give up this text.

Mark 15: 42: "And now when the even was come, because it was the preparation, that is, the day before the Sabbath." This must be the weekly Sabbath; for the passover sabbath certainly would not be spoken of in this independent manner. It is the opinion of good critics, that the term, "the preparation," does not apply to any feast sabbath, but to the weekly Sabbath alone. Thus Andrew's "Life of our Lord," p. 452, says:

"But the main reason that made a time of preparation necessary for the weekly Sabbath, was, that on that day no food could be prepared, whereas, it could be upon a feast sabbath. Nor anywhere in Jewish history does the latter appear as equal to the former in sanctity and dignity. All labor but servile labor was then lawful. There seems, then, no good reason why every feast sabbath should have had its day of preparation; nor is there any proof of the fact."

On page 453, he adds:

"Thus we reach the result, that the term 'preparation,'

'*parasheue,*' is never applied, so far as we know, to any day preceding a feast, but is applied by the evangelists, by Josephus, and by the Rabbis, to the day before the Sabbath. Recurring weekly, this would readily become the current designation of the sixth day, and equivalent to its proper name, or to our Friday."

John once uses the word "preparation" in connection with the passover. Thus in chapter 19: 14, he says: "And it was the preparation of the passover, and about the sixth hour; and He said unto the Jews, 'Behold your King.'" Such an expression as this is easily accounted for from the fact that they did, on the fourteenth day of the month, prepare the lamb for the passover, and so we find the expression, "prepare the passover," several times used. But this evidently has reference only to the preparation of the lamb to be eaten that evening, and it is a very different thing from setting apart a day to be called "the preparation day," with reference to a rest and holy convocation to occur on the following day. On this point we quote again from Andrews, p. 453:

"It is insisted that the nature of this preparation is expressly defined by the addition, 'of the passover,' and cannot, therefore refer to the weekly Sabbath. But if '*paraskeue*' is used as equivalent to Friday, it would simply mean that this was the Friday of the passover, or the preparation day for that Sabbath that occurred during the paschal week."

This is certainly a reasonable explanation; and, taken in this sense, the expression, "*preparation* of the passover," would not have been used, had not the rest-day of that passover fallen upon the weekly Sabbath. Thus the evidence still stands good, that the day of the crucifixion was the preparation day; and the preparation day was the day before the weekly Sabbath.

But it is objected that this could not have been the day before the Sabbath, because the women would not have had time

to prepare their spices and ointments (Luke 23:56) between the death of Christ and the close of the day. Let us see. It was but little past the ninth hour when Jesus cried with a loud voice, "Father, into Thy hands I commend My spirit," and bowing His head expired. (Luke 23:44-46.) This was about three o'clock in the afternoon. Between that and sunset they had nearly three hours, and the city, where all necessary articles could be procured, was nigh at hand. This would seem to be ample time for what they had to do; and this will appear still more evident, when we consider what others did do: 1. After Jesus was dead, Joseph went into the city, found Pilate in his palace, and obtained leave to care for the body of Jesus. (John 19:38.) 2. Nicodemus came with a mixture of aloes and myrrh, about an hundred pounds' weight. (Verse 39.) Where did he get this? He certainly did not carry that amount around with him. He must have gone into the city, after Jesus expired and bought those spices, and returned to the cross, and that, too, before the body was taken down. (John 19:39, 40.) 3. After Joseph obtained permission to take charge of the body, he bought the fine linen in which it was to be shrouded for the tomb. Mark 15:46.

Now if these noblemen had time, as the record says they did, to go into the city, and make these purchases, and duly robe the body in the linen with the myrrh and aloes, the women had time also to purchase and compound the spices and ointments which they designed afterward to use. But if they did not have time to complete the work before the Sabbath, there was still time in the evening following the Sabbath, to make additional purchases, and to finish the preparations. And the record in Mark would indicate that though they had prepared spices, etc., before the Sabbath, as Luke (chap. 23:56) declares, they also made other purchases, after the Sabbath; for he says:

"And when the Sabbath was past, Mary Magdalene and Mary the mother of James and Salome, had bought [Greek, first aorist tense, simple past, *bought,* not *had bought*] sweet spices that they might come and anoint Him." This was before anyone had been to the sepulcher; but, having completed their preparations, early the next morning they repaired to the sepulcher, bearing their spices with them. (Luke 24: 1.) Thus this objection to the view that Jesus was crucified on Friday disappears.

ARGUMENT FROM THE TYPES.

There is one more line of argument, which is absolutely conclusive in favor of the view that Christ was crucified on Friday and rose on the first day of the week; and that is the argument from the types. Christ was the antitype of the passover lamb. "Christ, our passover, is sacrificed for us." (1 Cor. 5: 7.) The lamb was always to be killed on the 14th day of the month, "between the two evenings," (Ex. 12: 6, margin), that is, between three P.M. and sunset. (See Robinson's Greek Lexicon, under "*opsia.*") So Christ expired at the legal time, on the 14th day of the month, a little after three P.M., "between the two evenings." The passover He ate with His disciples the evening before, was by anticipation. We know the day He died was the true time for slaying the paschal lamb, or He could not have been a true antitype. The day following, that is, the 15th, was the first passover sabbath. (Lev. 23: 6.) And on the morrow after this passover sabbath, the sheaf of first-fruits was waven before the Lord. Lev. 23: 11-15.

In proof that "the morrow after the sabbath" (Lev. 23: 15) was the 16th day of the month, and that the day preceding it, that is, the 15th, the passover sabbath, is the sabbath referred to, we present the following from Smith's Bible Dictionary, edited by S. W. Barnum. Under "Passover," he says:

"On the 15th, the night being passed, these was a holy

convocation, and during that day no work might be done, except the preparation of necessary food (Ex. 12:16.)....On the 16th of the month, 'the morrow after the Sabbath' (*i. e.*, after the day of holy convocation), the first sheaf of harvest was offered and waved by the priest before the Lord."

Under "Pentecost" he says:

"Pentecost (fr. Gr. *pentecoste*=the *fiftieth* sc. day from the second day of the feast of unleavened bread or the passover)......1. The time of the festival was calculated from the second day of the passover, the 16th of Nisan. The law prescribes that a reckoning should be kept from 'the morrow after the sabbath' to the morrow after the completion of the seventh week, which would, of course, be the fiftieth day (Lev. 23:11, 15, 16; Deut. 16:9)."

On the expression "morrow after the sabbath" as given in the foregoing extract, he has this note:

"It has been generally held that the 'sabbath' here=the first day of holy convocation of the passover, the 15th of Nisan mentioned in Lev. 23:7 (compare verses 24, 32, 39). Some have made the 'sabbath' here=the seventh day of the week, or *the Sabbath of Creation*, as the Jewish writers have called it; and thus the day of pentecost would always fall upon the first day of the week. But Bahr proves from Josh. 5:11 and Lev. 23:14 that the omer was offered on the 16th of Nisan."

Bagster's Greek Lexicon, under "Pentecoste," says:

"One of the three great Jewish festivals, so called because it was celebrated on the *fiftieth* day, reckoning from the second day of the feast of unleavened bread, *i. e.*, from the 16th day of Nisan."

Andrew's "Life of our Lord," p. 434, says:

"The ceremonies of the second day of the feast, the 16th Nisan, were peculiar, and important to be noted. Upon this day the first-fruits of the barley harvest were brought to the temple, and waved by a priest before the Lord, to consecrate

the harvest; and not till this was done, might any one begin his reaping. Lev. 23:10–12."

Similar testimony might be greatly multiplied; but these quotations are sufficient. Let the reader note the order of these events: 1. The paschal lamb was slain on the 14th day of the month; 2. The 15th day was the passover sabbath; 3. On the 16th day, the morrow after that Sabbath, the sheaf of the first-fruits was waved before the Lord. Now as the passover lamb typified the *death* of Christ, so *the wave-sheaf typified His resurrection.* Paul not only calls Christ our "passover," but he calls Him also our "first-fruits:" "For as in Adam all die, even so in Christ shall all be made alive. But every man in his own order: *Christ, the first-fruits,* afterward they that are Christ's at His coming." (1 Cor. 15:22, 23.) "But now is Christ risen from the dead, and become *the first-fruits of them that slept.*" (Verse 20.) And in fulfilling this type, Christ must follow the same order on the same dates. Thus He was slain on the fourteenth day of the month, which that year fell on Friday. The next day, the fifteenth, was the passover Sabbath, and chanced that year to be the weekly Sabbath also. On the morning after that Sabbath, the sixteenth, which happened that year to come on the first day of the week, *He was raised from the dead,* in fulfillment of the type of the wave-sheaf. There was but one full day, 15th Nisan, between the killing of the lamb on the 14th and the waving of the sheaf on the 16th. So there could have been but *one full day* between Christ's death upon the cross, and His resurrection. Whoever puts in more, shatters the whole typical system into fragments, by making it a failure. But the fact that Christ was crucified the 14th and raised the 16th, does not vitiate the declaration that He was to be "three days and three nights in the heart of the earth;" for that expression in-

cludes, as we have seen, more than simply the time He was in the grave: it reaches from His betrayal to His resurrection; and between those points, there is all the time requisite to fulfill the prediction. (See again the diagram.)

With the view here presented; namely, that Christ was betrayed the evening following the 13th of Nisan, was crucified Friday, the 14th, expired and was buried between three P.M. and sunset of that day, lay in the grave the 15th, and rose on the morning of the first day of the week, the 16th, — with this view, we say, there is the most perfect harmony between type and antitype, prediction and fulfillment, the words of Christ, and the words of His disciples, and the testimony of all the evangelists throughout. There is not a flaw, fallacy, weakness, or discrepancy in the entire argument. And we commend it to all who may have been in anywise perplexed on this subject, as one on which they may rest with all the assurance that is born of demonstration. U. SMITH.

A Great Error of the English New Testament Corrected.

(DIMBLEBY.)

This point in connection with the events of dates belong to Acts, chaps. 20-24, is an important one in respect to our historical knowledge of St. Paul's travels. It will be seen that by 24: 22, 23 that Felix adjourned St. Paul's case, and then, "after certain days," (twenty-four) probably to another court day. Felix came with Drusilla, his wife, who was a Jewess, and sent for St. Paul in order to hear more of the Christian faith. This act was repeated during the remaining three months of the year.

But in the twenty-seventh verse we are told that "when two years were fulfilled," Felix was succeeded by Festus.

This must be an erroneous translation. It is worse, however, in the authorized version where it says, "but after two years." What the original states is, "When two years were completed," that is, not two years from the adjournment of the case, but when the period arrived in Jewish time, requiring two Lunar years to receive the additional intercalary days. The Jewish years were triple in character, having thirty-four intercalary days at the end of each third year. During the first one, Lunar and Solar time were together, but Lunar years having only 534 days, the second year began eleven days before the Solar, and the third year was twenty-two days in advance of the Solar. Consequently, at the end of these two years, the intercalary days were required to prevent the next year from being thirty-three, but really thirty-four days in advance. This is the meaning of Acts. 24: 27.

Now for the proof. The next chapter tells us that "after three days" Festus went up to Jerusalem. If the reader looks at the Ancient Hebrew Solar Cycle, he will see that the third intercalary day of this twelfth year we have been speaking of, was Sabbath day, so that as Festus would not travel in Judea on the rest day, he would wait until after the third day, which St. Luke here particularizes. Then again, in verse 6, the next Sabbath day is spoken of, namely the 10th, and this clears up the jumble in the margin of the authorized version. Festus seems again to have waited till the Sabbath was over before returning to Cæsarea. These two Sabbath days 3rd and 10th, could not be any other than those in the intercalary days at the foot of the twelfth year of the cycle. They could not be those in the first month of the fifteenth year, because the tenth day was "the Fast," mentioned in Acts. 27: 9.

In addition to this, we have evidence of the apostle being at sea in the intercalary period. The word *ikanais* in the 7th.

and repetition of it in the 9th verse, alludes to this particular time in the sense of *great, adapted, sufficient.* It is commonly used in a demonstrative sense in connection with the intercalary period. It forms the date of St. Paul's conversion, (Acts 9: 23) and of St. Peter's sojourn at Joppa (verse 43,) both alluding to the intercalary period of 4031 A. M., which was 32 A. D., the last year on the Ancient Hebrew Cycle. It is found in the same three senses, though not in relation to time, in Mark 1: 7, Luke 3: 16; 2 Cor. 2: 6, 16, etc. It should, therefore, read: "And when He had sailed slowly in intercalary days," "When intercalary time was gone through (not spent), and the voyage was now dangerous, because the Fast was now already gone by," etc.

I have not space to enlarge on the subject here, but I do not like the English translation of the last chapters of the Acts. Let it, however, be remarked that St. Luke finishes the history of St. Paul where he began it, in the end of the last year of the cycle, forming altogether 30 years, as will be seen by the additional two whole years (28: 30), and this explains the somewhat abrupt termination of the narrative.

I do not mean to say that the Greek work "*ikavos*" always refers to intercalary days. But it does when associated with that period. It is more than thirty years since my tutors taught me to read Greek, but Parkhurst was my first guide to a knowledge of this important word, and I would refer the reader to his copious citations.

ANOTHER MISTRANSLATION.

In the authorized version (Luke 6: 1) we read "On the second Sabbath after the first." No one can understand what this means. But in the revised version, instead of properly amending the Greek, it is ignored, and the verse reads "a Sabbath." There is a marginal note stating "Many ancient author-

ities insert second-first." Indeed, I have never seen any copies without the Greek words. But the fact is, this verse gives us one of the most definite dates of the history of our Lord's ministry. It reads "The Sabbath on the second of the first month." A glance at the Ancient Hebrew Solar Cycle shows that the Sabbath days of the first sacred (seventh civil) month, eleventh year of the Cycle, fell on the 2nd, 9th, 16th, 23d, and 30th days. Why should the historical evidence of the veracity of ancient writings be destroyed by mistranslations of this kind? Before the revised version was published, an official letter was sent to the revisers mentioning the names of two gentlemen who were able to assist them in the translation of chronological expressions, but beyond a courteous acknowledgment of this letter, nothing more was heard of it. The result of this indifference is in the hands of every intelligent reader, because just as the simple use of the multiplication table in every school in England insures the correct adding up of any amount of numbers, so does the application of a system of astronomical measurement provide the accurate determination of periods of time all over the world.

I regret the necessity for speaking so plainly of a work to which I looked forward with gladsome anticipations, but to be silent in noticing so much error, and to allow the New Testament to go down to posterity, stripped of the great scientific testimonies which no other historical work possesses, would, in my case, be unpardonable. *There is not a day or period of time in the Old or New Testament* which is not in perfect accord with the astronomical lines of scientific time derived from eclipses or the transits of the planets, Mercury and Venus, or which is not also determined by the stern application of the *Metonic or Lunar Cycle*, and therefore to obliterate the testimony of authenticity in the Scriptures, or to make them state

what was never written, is to impugn their veracity and allow cavillers to place them on an equality with spurious writings. The religion of the Bible, it should also be stated, is the only one which has a genuine history, and is corroborated by the deductions of science. The Bible is a far greater book than has been supposed. It teams with science, and we ought not to allow skeptical men the opportunity of placing a finger upon its pages.

CHAPTER XII.

"Vox Dei," or Eclipse Line of Time.

NO. I. ECLIPSE OF THE SUN.

NO. 1. Solar eclipse occurs every eighteen years and ten or eleven days. It thereby moves through the year by being ten or eleven days later each occurrence, and in the course of 651 Solar years completes its Cycle by again taking place on the same date, thus forming a period of time, called the "Great Astronomical Year," to which all history must bow, and against which no man can utter a word.

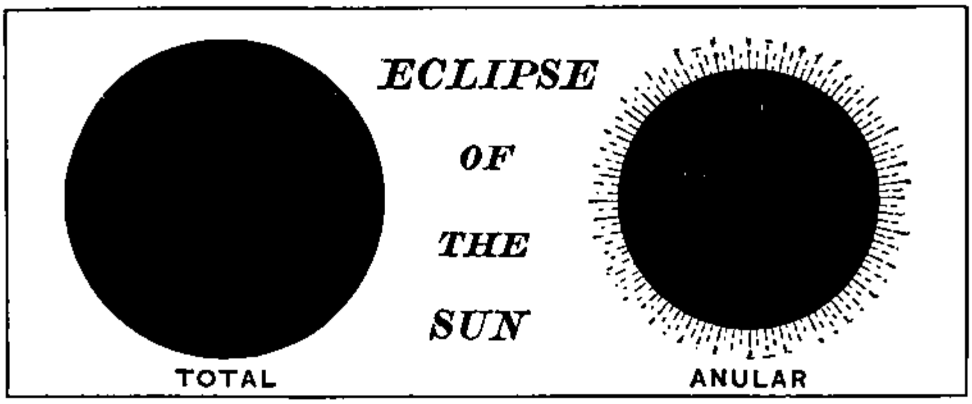


Fig. 5.

PSALM 19: 1–6. "VOX DEI," OR TIME BY ECLIPSES.

We observe time by the enumeration of years, but recent discoveries enable us to do it more accurately, and with greater simplicity, by the enumeration of eclipses, inasmuch as they constitute astronomical measurements against which not a word can be uttered. The method of this new application, which is producing splendid and most gratifying results, is as follows: There are eighteen years and ten to eleven days between the reoccurence of a *particular* or the same eclipse, that is to say,

the total eclipse of the sun which took place on Jan. 11, 1861, occurred again on Jan. 22, 1879. Hence, this is an important period which may be watched and traced throughout all time. It is also evident that all the intervening eclipses in such a period are part of a common team beginning with this period, in the same way as the intervening days of the week form part of a period of seven days, beginning with a particular day—Sunday. The number of the eclipses taking place in this period of eighteen years and ten days is, as a rule, seventy; the variation arises owing to the appearance of two or three "casuals," or the omission of a like number of "irregulars" during the succession of the period named, until the eclipses are all back again in their places as to the dates of their occurrence, namely, after 651 years—another grand proof for the scientific measurement of time, as well as a particular junction when we know the position of the eclipses. These 651 years are also the natural consequence of the occurrence of two other periods or cycles, each consisting of eighteen revolutions of the first period of eighteen years and ten to eleven days, which are required for reproducing an eclipse. In other words there are eighteen Common Teams of eclipses in each of the two cycles forming the maximum cycle of 651 years. Eighteen times eighteen are 324, but the cycles, which are respectively marked A and B, are not alike. A consists of 325 years, B of 326.

If a glance be now made of the diagrams and tables, the foregoing explanation will be readily understood. Begin with the numeration of a "Common Team" with the number of each of the 70 eclipses attached, and then look at "Two Consecutive Teams Compared," viz., the last, or eighteenth of Cycle B, and the first of Cycle A. Notice next the "Bird's Eye View of the Eclipses in the Christian Era," which is another representation of the first team of Cycle A, beginning with

Eclipse No. 1 of the 11th of January, 1861, already mentioned.

The great point which had to be determined in this classification of the eclipses was: which is eclipse No. 1 beginning a team? Only the mind of a good chronologist could solve the problem. It was beyond the reach or province of astronomy, though a complete knowledge of that science was also necessary for its solution. The grand discovery had first to be made by resolving dates into their natural Solar Cycles, which is another stern and scientific determination of time, and particularly so with Lunar years, which are definitely formed by Lunar movements. Fortunately, for us, the years of Scripture history are all Lunar, and therefore unalterable, and supplying us with an astronomical line of time which cannot be altered an hour. The Solar Cycle obtained from the Antediluvian dates given us is *independent of the Biblical statement,* the first year of the Cycle as beginning with the first day of the week, and of course, the first Sabbath on the 7th of the first month, a Saturday, and there are several proofs by astronomical and chronological measurements—particularly the eclipses and the Metonic or Lunar Cycle—that this seventh day has come down to our own time, and that the historical or A. M. year 0 was the astronomical year 1. *When this grand* point of time was thus found a host of additional proofs arose corroborating the fact that the central Solar eclipse on January 11th, 1861, is No. 1, the beginning of a Common Team, and first occurring in the first week of the first month in the first year of the first Solar Cycle. Nothing is capable of greater or easier proof, and nothing can be more grand, absolute and scientific than this STARTING POINT OF TIME.

The reader will see that by traveling backwards in date, repeating cycles of 326 and 325 years alternately, as shown in the table of "Eclipses from Creation," that we easily trace No.

1 eclipse back to Mosaic creation, and by the use of the "List of Astronomical Years" we quickly find the year of any eclipse, upon either of the "Bird's Eye Views," for all time. Thus presented, the eclipses verify the true number of the years of the world, because we cannot be deceived unless just 651 years were *cleanly omitted,* and that at the precise period when Cycle A began. But even this would require the breaking up of a Solar Cycle, which in respect to Lunar years is impossible, because they are the register of the movement of the moon. The eclipses and Solar Cycles, with the register of seventh days must agree.

The progression of an eclipse through our year is not accomplished by the same eclipse, as explained in a note above the list of astronomical years, otherwise the repeating date would not be reached, but would be determined in 684 Lunar years, which are 18 times 18. By dividing the Maximum Cycle into two, A and B, respectively 325 and 326, we are able to use the three Solar eclipses of line 1, thus accommodating our Solar year. This will be understood by astronomers, but may be difficult to general readers. It is, however, sufficient to see that the grand result is obtained. In the "Example of the Eclipses Moving through the Solar Year," double dates represent dissimilar eclipses, but the list can be otherwise formed. 5860 was 1860-1 A. D., Total Eclipse No. 1, January 11th.

The adjoining column must determine the number of all past years.

	1	
A		325
	326	
B		326
	652	
A		325
	977	
B		326
	1303	
A		225
	1628	
B		326
	1954	
A		325
	2279	
B		326
	2605	
A		325
	2930	
B		326
	3256	
A		325
	3581	
B		326
	3907	
A		325
	4232	
B		326
	4558	
A		325
	4883	
B		326
	5209	
A		325
	5534	
B		326
	5860	

The 651 years during which No. 1 eclipse of the sun proceeds through one year and occurs again at the beginning of January is divided into 325 and 326 years. It will be seen how simple this work is accurately revising the eclipses of the present time, from which we select No 1, to Creation year. The black figures are the product obtained by adding alternately these 325 and 326 years respecting cycles A and B. They are all verified by the "Comparative Analysis," proving that we can neither add nor take away one year of time, or, what is also of greater importance, interfere with the number of cycles. We cannot dislodge the moon from its orbit, and this absolutely proves that its revolutions have always been what they now are, and thus cover the number of years which sacred and secular history supply from the institution of time when Adam was "formed." At the beginning of each 651 years the eclipses must have always stood in the order set out in the "Bird's Eye View" of eclipses, otherwise they could not take place in the order they now do. There cannot be an eclipse of the sun unless the moon be new and as there are 354 days in a Lunar year now, as seen by the fact that in the year 1861 A. D. there was a total Solar eclipse on the 11th of January and another on the 31st of December of the same year, so there were 354 days between the same two eclipses in the time of Noah, because the dates of the Flood supply a Lunar year of 354 days.

The reader will see that from the astronomical year 1 to 5860 there are eighteen cycles formed alter-

nately of A 325, and B 326 Solar years, which collectively are nine Maximum Cycles of 651 years each. Hence the eclipses of the first year must be those of line 1 on the "Bird's Eye View" of a Common Team of Eclipses in order to reach those given in ancient records 900 years before Christ and down to those of our own time corrected after year 4000, when our Era began, because the eclipses before 4000 require no correction. If, then, the reader understands the working of the Common Team as bodily moving like a panorama through the months and across the page (no eclipse leaving its line) in the course of 651 years you will understand how to verify time by eclipses, and know the eclipses which have occurred in each year of all past time. By the directions given under the heading "How to Find the Eclipses," he will be able to do this in half a minute, and on a piece of paper no larger than the nail of his thumb.

The astronomical year is always one more than A. M. year, because it represents present motion and not past time, and starts Creation year as 1 instead of 0. The astronomical year 5860 (bottom of column) was 5859 A. M. and 1860-1 A. D. We are nine months in advance of the astronomical, and one year and nine months before the A. M. year, because our year begins with January instead of at the end of September. This is also proved by the eclipses, because they all occur one year and nine months before the time assigned to them in our almanacs. Just as they would occur by the departure of a train by the time of an erroneous clock which is one hour, forty-five minutes too fast. This fact throws all astronomical phenomena and all history into confusion. For instance, when we trace the ancient eclipses down to our time or compute years of history, we are obliged to make this allowance before we can adjust them. The error starts with the beginning of the Christian Era, and was in-

creased by altering the commencement of our year. Our 1861 began about the commencement of the 4th month of 5859 A. M., which was 5860 astronomical year. If astronomical science had made known this fact two centuries ago, we would have been saved from thousands of errors, and the records of history could not have been doubted. We should have always known that the present precisely requires the past. The eclipses would have been to us as the hours struck in a belfry, and with the years and all the seventh days numbered and consecutive from the beginning of time. All our literature shows how dark the minds of men have been on these simple subjects.

COMMON TEAM OF ECLIPSES (70) OCCURRING EVERY EIGHTEEN YEARS.

As there are seven days in a week, so also are there *about* seventy eclipses in eighteen years, repeating themselves in the same manner as do days in the week. A week is a team of seven days, and a cycle of eclipses is a team of seventy occurring in eighteen years.

The comparison is not *exactly correct*. The Solar eclipses slightly vary in character, that is to say, a partial eclipse may become total, when the time of its repetition after eighteen years arrives, or it may not occur at all; but it ultimately occurs again at the same time and in the same character. Therefore, the subjoined team which is first of a series of thirty-six, when all eclipses are back again in their places as to their dates, is the correct type of a team, and notwithstanding a few changes, is structurally the same. In the next place every eclipse is ten to eleven days more than eighteen years. This fact carries every eclipse through the course of 651 years, that is after the subjoined team has occurred thirty-six times.

The eighteen lines in the following diagram represents eighteen years. The eclipses do not leave their lines. When the extra ten or eleven days have carried each of them to the

LINE. A. M.	CHARACTER AND NUMBER OF THE ECLIPSES.						ASTRON.	A. M.	A. D.
1—0	⊙ 1	⊙ 2	◍ 3	⊙ 4	..	..	5860–1	5859–60	1861
2—1	● 5	* 6	* 7	● 8	* 9	..	5861–2	5860–1	1862
3—2	* 10	● 11	⊙ 12	◍ 13	..	..	5862–3	5861–2	1863
4—3	⊙ 14	⊙ 15	..	..	..	..	5863–4	5862–3	1864
5—4	◍ 16	⊙ 17	◍ 18	..	..	..	5864–5	5863–4	1865
6—5	* 19	● 20	* 21	● 22	* 23	..	5865–6	5864–5	1866
7—6	⊙ 24	◍ 25	⊙ 26	◍ 27	..	..	5866–7	5865–6	1867
8—7	⊙ 28	⊙ 29	..	..	..	..	5867–8	5866–7	1868
9—8	◍ 30	⊙ 31	◍ 32	⊙ 33	..	..	5868–9	5867–8	1869
10—9	● 34	* 35	* 36	● 37	* 38	⊙ 39	5869–70	5868–9	1870
11—10	◍ 40	⊙ 41	◍ 42	⊙ 43	..	..	5870–1	5869–70	1871
12—11	◍ 44	⊙ 45	◍ 46	⊙ 47	..	..	5871–2	5870–1	1872
13—12	● 48	* 49	● 50	* 51	..	..	5872–3	5871–2	1873
14—13	⊙ 52	◍ 53	* 54	● 55	..	..	5873–4	5872–3	1874
15—14	⊙ 56	⊙ 57	..	..	..	..	5874–5	5873–4	1875
16—15	◍ 58	⊙ 59	◍ 60	⊙ 61	..	..	5875–6	5874–5	1876
17—16	● 62	* 63	* 64	● 65	* 66	..	5876–7	5875–6	1877
18—17	⊙ 67	◍ 68	⊙ 69	◍ 70	..	..	5877–8	5876–7	1878

EXPLANATION OF ECLIPSES.

⊙ Central Solar, Total or Annular.
* Partial Solar. (Sun.)
● Total Lunar. (Moon.)
◍ Partial Lunar.

end of the year, they start again in January. In this way the eclipses tell us all past time and form the correct history of the world. The whole of the team bodily moves like a diorama ten to eleven days each team, and so all eclipses come back again to their old places as shown in the "Bird's Eye View of the Eclipses in the Christian Era" diagram. When reversed it starts at the period of Creation, and scientifically proves the number of all past years.

It is only a question of arithmetic to show that eclipses of line 1 were Creation year.

The year 1861 A. D. had the same eclipses as the year 0 A. M., or astronomical year 1.

The astronomical year by counting year 0 as 1, is always one more than the A. M. year.

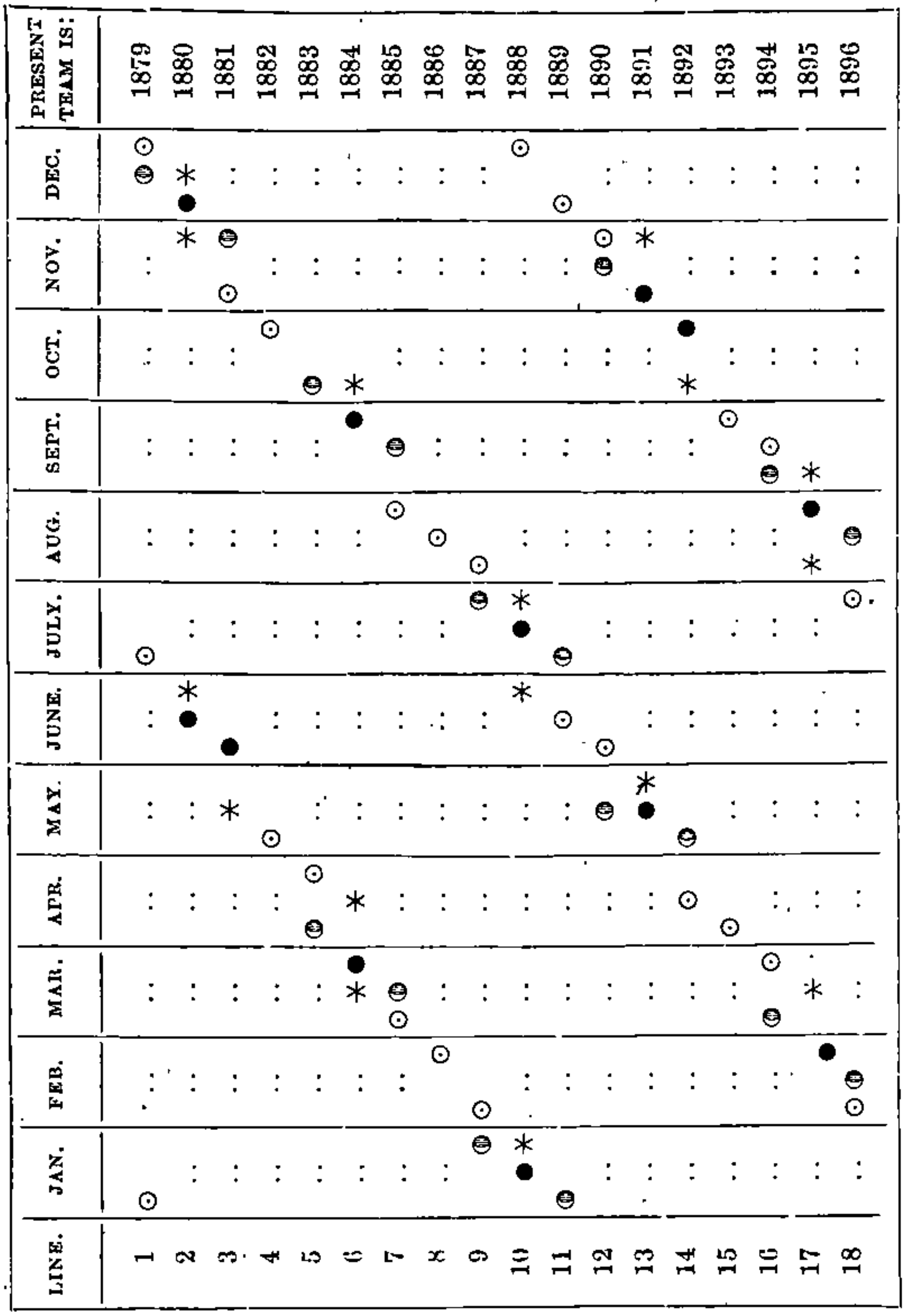
A Central Solar Eclipse may be total or annular (leaving a ring of the sun to be seen).

The second Solar column gives the first 18 (17) years of Adam's life, having the same eclipses as the 18 years beginning with 1861 of our own time. (See list of Astronomical Years, which carries the team backwards from 1861 to year 1.) This team of 70 forms the Bird's Eye View.

HOW ECLIPSES PROVE ANY PERIOD OF HISTORY.

Methuseleh was born in 687, which was 688 astronomical, Line 1 of eclipses; add 969, the years of his life, it is 970th astronomical year from birth, and we have 1656 for the year of his death. It was the Flood year, at the beginning of which he died, that was 1657 astronomical year, line 4. The eclipses to produce those we now see require these years, and thus show us that the period of his years is correct history.

"BIRD'S EYE VIEW" OF A COMMON TEAM OF ECLIPSES (70) CHRISTIAN ERA.



The above is the first team of Cycle A, already shown in other forms, as occurring in 1861 to 1878 inclusive. It also shows the time of the month when they occur. They have always this position after 651 years. Lines are years.

[In order to authenticate our chronological tables of eclipses, I wrote Professor J. Morrison, of Washington, D. C., for a record table of the eclipses, for the first century or so. I am happy to give these, not only to confirm the readers in the correctness of these Cycles of Time, but because of Prof. Morrison having given them the more definitely than Prof. Dimbleby, and inasmuch as Prof. M. has given the precise date (*h* and *m*) of their occurrence. Also, in order that our American institutions may know who Prof. J. Morrison is, we give his letter *verbatim*, and following the same his table of Solar and Lunar Eclipses:]

NAUTICAL ALMANAC OFFICE,
BUREAU OF NAVIGATION, NAVY DEPARTMENT,
WASHINGTON, D. C., NOV. 23, 1892.

ALEX. GLEASON, Esq.:

My Dear Sir—I herewith send you the Eclipse Table you ask for. You can readily extend it by adding on the *Saros* as directed at foot of page. If I were not so busy with official and other duties, I would have extended it to end of century, but I am about overwhelmed with work. I am mathamatical and astronomical editor of the "World Almanac," "Brooklyn Citizen's Almanac," and the "Baltimore Sun Almanac," besides other duties, all of which keep me on the "*qui vive.*" . . . .

EXPLANATION OF THE TABLE OF SOLAR AND LUNAR ECLIPSES.

(*a*) Means annular eclipse (the sun of course.)
(*p*) A partial eclipse of sun or moon.
(*t*) A total eclipse of sun or moon.
(*a t*) Annular at the beginning and total during middle.

By this {≡} we understand that there are two or more in the same month. The *Saros*, 18 years, 11 days, 8 hours, are added, or, 18 years, 10 days, 8 hours, when five leap years intervene. Yours truly, J. MORRISON.

The table referred to above corresponds to, and coincides very closely with Prof. Dimbleby's "Bird's Eye View of a Common Team of Eclipses, (70) Christian Era."

	JANUARY.	FEBRUARY.	MARCH.	APRIL.	MAY.	JUNE.
	D. H.	D. H.	D. H.	D. H.	D. H.	D. H.
1878	....	⊙*a* 1 19.7 ◐*p* 16 23.6				
1879	⊙*a* 21 23.8	....	....	....	....	....
1880	⊙*t* 11 10.8	....	....	....	....	◐*t* 22 1.8
1881	....	....	....	....	⊙*p* 27 11.9	◐*t* 11 18.9
1882	....	....	....	....	⊙*t* 16 19.7	....
1883	....	....	....	◐*p* 22 0.1	⊙*t* 6 9.8	....
1884	....	....	⊙*p* 26 18.8	◐*t* 9 23.9 ⊙*p* 25 2.3	....	....
1885	....	....	⊙*a* 16 6.2 ◐*p* 30 4.3	....	....	....
1886	....	....	⊙*a* 5 10.2	....	....	....
1887	....	◐*p* 7 22.7 ⊙*a* 22 9.2	....	....	....	....
1888	◐*t* 28 11.4	⊙*p* 11 11.1	....	....	....	....
1889	⊙*t* 1 9.3 ◐*p* 16 17.4	....	....	....	....	⊙*a* 27 20.9
1890	....	....	....	....	....	⊙*a* 16 21.9
1891	....	....	....	....	◐*t* 23 6.3	⊙*a* 6 4.6
1892	....	....	....	⊙*t* 26 9.2	◐*p* 11 11.2	....
1893	....	....	....	⊙*t* 16 2.5	....	....
1894	....	....	◐*p* 21 1.5	⊙*a* 5 16.5	....	....
1895	....	....	◐*t* 10 15.5 ⊙*p* 25 23.6	....	....	....
1896	....	⊙*a* 13 3.5 ◐*p* 28 8.2	....	....	....	....

JULY.	AUGUST.	SEPTEMBER.	OCTOBER.	NOVEMBER.	DECEMBER.	
D. H.	D. H.	D. H.	D. H.	D. H.	D. H.	
⊙*t* 29 9.4	◐*p* 12 12.7					
⊙*a* 18 21.1	....	....	....	....	◐*p* 28 4.2 ⊙*p* 7 8.8	1
⊙*a* 7 1.6	....	....	....	....	⊙*p* 1 15.3 ◐*t* 16 3.6 ⊙*p* 31 2.1	2
....	....	....	....	⊙*a* 21 4.7	◐*p* 5 5.1	3
....	....	....	....	⊙*a* 10 11.4	....	4
....	....	....	◐*p* 15 19.4 ⊙*a* 30 11.6	....	....	5
....	....	....	◐*t* 4 10.1 ⊙*p* 18 11.6	....	....	6
....	....	⊙*t* 8 9.3 ◐*p* 23 19.5	....	....	....	7
....	⊙*t* 29 0.9	....	....	....	....	8
....	◐*p* 3 9.1 ⊙*t* 18 17.3	....	....	....	....	9
⊙*p* 8 18.6 ◐*t* 22 17.7	⊙*p* 7 5.5	....	....	....	....	10
◐*p* 12 8.8	....	....	....	....	⊙*t* 22 0.9	11
....	....	....	....	◐*p* 26 1.0	⊙*at* 11 15.2	12
....	....	....	....	◐*t* 15 12.1	⊙*p* 1 0.1	13
....	....	....	⊙*p* 20 5.6	◐*t* 4 4.1	....	14
....	....	....	⊙*a* 9 8.2	....	....	15
....	....	◐*p* 14 15.6 ⊙*t* 28 18.1	....	....	....	16
....	⊙*p* 20 0.0	◐*t* 3 17.8 ⊙*p* 18 9.8	....	....	....	17
....	⊙*t* 8 16.6 ◐*p* 22 19.5	....	....	....	....	18

The present team of eighteen years (18 lines) of eclipses is the second, the first having begun with 1861 A. D., and ended with 1878. This second team is the same as the first, except their dates, which are all ten or eleven dates later. Thus the eclipse of the moon, No. 13, which in the diagram (showing the first team took place on the 25th of November, 1863,) occurred on December 5th, 1881, eighteen years later. Its next appearance will be December 16th, 1899; after 651 years they all will have moved through the year and be back at their old places. Hence, the eclipses measure time in teams back to Creation, beginning the foregoing diagram—"Bird's Eye View of a Common Team of Eclipses."

PRACTICAL USE OF ECLIPSES IN PROVING HISTORY.

By simply noticing the eclipses as they occur year after year, the reader will see that they can be applied to greater practical use.

To point out this practical use, let the reader give his attention to the following remarks: By looking at the diagram called the "Bird's Eye View of Eclipses of the Christian Era" [on a preceding page of this work] he will see that the eclipses occur during a period of eighteen years. The diagram gives them from 1861 to 1878 inclusive, and each year is a line. Consequently, they all come over again in the next eighteen years, viz., 1879 to 1896, inclusive. The eclipses never leave their respective lines, but they move from the left side to the right, by progressing ten to eleven days each occurrence. In other words, all the eclipses of the present eighteen years are taking place ten to eleven days later than they did in the previous eighteen years. As a week has seven days (and called by their names respectively), each of which is numbered from the first to the seventh, so eighteen of these eclipses consist of eighteen years, each of which is called a line, numbered

from 1 to 18. This simple observation explains the order or system of eclipses, and always shows where we are in the course of time or progress of the history of the world. We know where we are in a week when it is Wednesday, that is to say, how far from the beginning of the week or how near its end. So also, by calling the eighteen years (which is the length of the period containing the eclipses), eighteen lines, we know where we are in each line. For instance, the year 1883 is the line 5, and the eclipses of the year will be seen on the line, except in case of a variation sometimes occurring in respect to those of the line. Hence, line five, eighteen years ago, was 1865, and when we have got through the present eighteen years, it will be 1901. In each of these years, viz., 1865, 1883, and 1901, the same eclipses occur, and as line 1 was Creation year, the eclipses of 1883 will be the same as those in Adam's fifth year.

This subject calls for a few observations respecting chronological Lunar motions. Both the position and shape of the orbit of the moon are continually changing. They do not, however, undergo changes which have not previously existed; for, although some astronomers seem to be much perplexed by these changes, the ancient and periodical character of extra solar eclipses, or the omission of others, conclusively show to my mind that each change, whether of position or shape, has previously existed. All the fluctuations may be reduced to simplicity by observing their periodical occurrence, and for myself I prefer to abide by such observation, rather than trouble myself with the perplexities arising from the effect of the attractions of other orbs on the moon and the tilted position of her orbit in relation to our ecliptic. It is evident that the fluctuations are not always such as the supposed law of gravitation requires. I cannot, however, omit expressing my admiration

of the unalterable precision of the movements of the moon and the continued dimensions of its orbit. The Lunar year has now 354 days, and it is evident by the dates of the Flood that it was the same length in 1656 A. M. It is, therefore, surprising that with so many contingencies no change has taken place in the distance of the moon from the earth or the period of the eclipses.

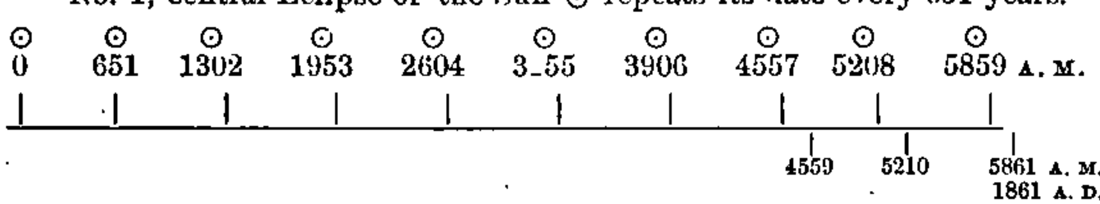
In support of the statement that our ideas of the Newtonian law of gravitation are not sufficient to account for all we see of the motions of planetary worlds, it is only necessary to add that in addition to the continued chronological precision of the movements of the moon, notwithstanding the "drag and pull" of neighboring planets, there are other singular things never accounted for. The motions, for instance, of the satelites of Herschel, or Uranus, are in a contrary direction to those of all other primaries; and in the next place the erratic movements of comets have little coincidence with gravitation. I do not deny the operation of this law, but unless we allow something else, how is the zone of the asteroids—now numbering 228 interlaced orbs—preserved without "THE CRASH OF MATTER AND THE WRECK OF WORLDS?" In fact, we cannot understand the axial revolutions of the sun, the planets and their satelites. We call gravitation a Law. More properly it is Force, and by noticing that it is often *Force controlled*—as is evident by securing chronological precision amidst opposing contingencies —may we not regard the motions of ALL WORLDS AS THE PRODUCTION OF WILL?

[We cannot understand how any intelligent astronomer can retain faith in the Newtonian system of astronomy, or his law of gravitation. The existing facts referred to by Mr. Dimbleby in the above are sufficient, to forever annihilate the inherent powers of worlds and systems *running themselves* by their own inherited *centripetal* or *centrifugal* force or attraction. Which is

it, we ask? If by continued journeying toward a magnetic attraction, do we reach that point where we are *drawn* or *forced*, after long *ages* or *cycles* have elapsed, to return to the place of beginning? and if so, or if it be either "force or attraction," from what source is it derived? Is God the servant of the laws He has made, or is Nature the servant of her Creator, and is she not sustained by Him? Are not "*all* things upheld by the Word of His Power?" (Heb. 1:3.) And since we have proven His Word by so many infallible sources let us take it as a sure guide, and believe that "By Him were all things created that are in heaven and that are in earth, visible and invisible, whether they be thrones or dominions, or principalities, or powers; all things were created by Him and for Him; and He is before all things, and by Him all things consist." (Col. 1:16, 17.) If we believe the latter quotations we have a resting place for the wearied expanse of thought and sublime contemplations; otherwise, like Noah's dove, we "have no rest for the sole of our foot."]

A GAUGE PROVING ALL PAST TIME.

No. 1, central Eclipse of the Sun ⊙ repeats its date every 651 years.



In the top row of figures, 0 is Creation period, year 0, and each successive year is obtained by the addition of 651 years, when Eclipse No. 1 reaches its cycle again nearly at the same date of the month, namely, at each thirty-sixth appearance. The thirty-six occurrences are each after a period of eighteen years and ten or eleven days. It is these ten days that carry the eclipse through the year (10 times 36 are 360), otherwise, the eclipse would always be on the same date. Nothing,

therefore, can be more simple or more reliable than this gauge of time, particularly as we have many ancient records. But by our almanacs Eclipse No. 1 appeared on January 11th, 1861, instead of in 1859. To rectify the error of our Solar year amounting to one year and nine months, a second row of years is required under the long gauge line. That it is an error occurring by three or four muddled alterations since the Christian Era began, is proved over and over again by the records of eclipses before the birth of Christ. No man can make the eclipses take place at the periods assigned to them in our almanacs without stretching the line of time. Hence, we find in the works of leading minds, such as La Place and others, discussions about alterations in the orbit of the moon. We are immensely indebted to the old astronomers, but they have not been time-keepers. The above are mile-posts of all time.

CHRONOLOGY.

Authenticated by the British Chronological Association. A. M.

Mosaic Creation, Sunday, 1st day of the 1st month of 1st year of the Solar Cycle 0

This was 1656 years before the Flood and 3996 B. C.

Appointment of the Flood made known to Noah, Saturday, 17th of 2nd month 1536

Obtained by falling on the "self-same day" of the week and date of the month, 120 years before Noah entered the Ark. See Genesis 7:3 and 7:13, with 5th year of the Antediluvian Solar Cycle. A splendid confirmation of history and the Cycle.

The Flood, Saturday (Sabbath day), 17th of 2nd month 1656

Abraham left the city of Ur, beginning the sojourn, Tuesday, 15th of 7th month 2082

This is the beginning of the period which terminated on the "self-same day" of the week "at the end of the 430 years. See Ex. 12:41-51, and Hebrew Solar Cycle, Tables *a* and *l*.

Israelites left Egypt, Tuesday, 15th of 7th civil (1st sacred) month... 2513

Death of Aaron, Saturday (Sabbath day), 1st of 11th civil (5th sacred) month.. 2552

Jordan crossed by the Israelites, Friday, 10th of 7th civil (1st sacred) month 2553

Dedication of Solomon's Temple, Wednesday, 7th of 1st civil month 3000

The seven days' dedication were Wednesday, 7th, to Tuesday, 13th, inclusive. Wednesday, 14th, was an "eighth day," made a solemn

	A. M.
assembly. Thursday, 15th, to Wednesday, 21st, were seven days' feast of tabernacles. Thursday, 22d, was the other eighth day, and "on the 23d day (evening of Thursday, 1 Kings 8: 66 compared with 2 Chron. 8: 10), he sent the people away."	
Ezekiel's "Visions of God," Saturday, 5th of 10th civil (4th sacred) month	3410
Birth of Jesus Christ, end of 3rd civil month—best found by Josephus' eclipse	3996
Christian Era began at the end of 3rd month. (Year 1 ought to have been 4001)	4000
Crucifixion, Friday, 15th of 7th civil month (A. D. 30)	4029
Pentecost, anniversary of the Law, 50th day from the Passover and from the Crucifixion, Sunday, 7th of 9th civil, or 3rd sacred, month	4029

The above are accurate astronomical measurements as well as records of history. Events recorded on Solar years, soon after the commencement of the Christian Era, cannot be correctly given without altering their dates, which are erroneous and do not agree, more or less, with astronomical time.

THE SUN DIAL OF AHAZ.

The incident mentioned in 2 Kings, 20:9, by which the sun dial of Ahaz went ten degrees backwards, could be occasioned by the total eclipse of the sun. Bible margin gives the year 713 B. C., deduct this from 4004 A. D., 3291 A. M. is the product. In the "List of Astronomical Years" line 1 was 3292 astronomical, which would be 3291 A. M. But I do not say this was the cause of the phenomenon.

THE SEVENTH DAY VS. THE FIRST.

The reader will observe the Divine exaltation given to the seventh day (Saturday) throughout Old Testament history, such as the nine dates of the Flood, and about a similar number in Ezekiel, all, with other examples, showing their connection with the first seventh day in Eden. But when we come to the New Testament, the same Divine exaltation is given to the first day of the week. St. John seems particularly to have called attention to this significant fact, which to the men of his

generation would be one of importance, by writing: "I was in the Spirit on the Lord's Day." I am, therefore, of opinion that our obligation to observe the latter is of equal force with the observance of the former by those who lived before Christ. I have a very large number of these examples of Divine selection, under the two dispensations; but they have been crowded out the present issue. Let me, however, say: the chronological character of the desecration of the Sabbath, under either dispensation, seems to be mutiny or rebellion—the highest offense—more as the rejection of Divine government than the breach of a moral law,—J. B. DIMBLEBY, London, E. C.

We have endeavored to give the opinions of wise and scientific men honor due in regard to all scientific questions; but when such questions make a *tangent* direct from the manifest teachings and plain Word of God, it is then that the Word should have a voice; that it may speak for itself, and readers be not deceived. We have found a paragraph of Mr. Dimbleby's which expresses his view of both the first and seventh day of the week, as to the sacredness of each. We freely give space to and quote the (above) paragraph, lest we should be considered guilty of suppressing it for a motive; for to his opinion Mr. Dimbleby has the same moral right that every other man has, or should have. Inasmuch as we have proven the Bible the infallible Word, we will let it speak a few words and then we will close this part of the work by hearing a few historical writers' testimony, and leave the reader to decide in his own judgment as to the convictions of Truth:

1. Is Sunday called the Lord's day in Rev. 1: 10 which Mr. D. quotes?

"I was in the spirit on the Lord's day, and heard behind me a great voice."

2. What day has the Lord always claimed as His?

"But the seventh day is the Sabbath of the Lord thy God." Ex. 20: 10.

3. What does the Lord say of His holy day, by the prophet?

"If thou turn away thy foot from the Sabbath, from doing thy pleasure on my holy day; and call the Sabbath a delight, the holy of the Lord, honorable; and shall honor Him, not finding thine own pleasure nor speaking thine own words; then shalt thou delight thyself in the Lord." Isiah 58: 13-14.

4. Of what did Jesus say He was Lord?

"Therefore, the Son of man is Lord also of the Sabbath." Mark 2: 28.

5. Did Jesus recognize the Sabbath as still existing at the time of Jerusalem's destruction, about A. D. 70?

"But pray ye that your flight be not in the winter, neither on the Sabbath day." Matt. 24: 20.

6. Remembering this injunction of their Lord, and acting upon it for nearly forty years, would the disciples forget the Sabbath day?

7. Is God particular to have His words obeyed to the letter?

"And in all things that I have said unto you be circumspect; and make no mention of the name of other gods, neither let it be heard out of thy mouth." Ex. 23:13.

8. Will He accept a substitute for what He has commanded?

"And Nadab and Abihu, the sons of Arron, took either of them his censer, and put fire thereon, and offered strange fire before the Lord, *which He commanded them not.* And there went out fire from the Lord and devoured them, and they died before the Lord." Lev. 10: 1, 2.

9. What said Jesus on the subject of substitution?

"But in vain do they worship me, teaching for doctrines the commandments of men." Matt. 15: 7-9.

a—What does our historians say about the matter?

"History does not furnish us with a single proof or indication that it was at any time so observed previous to the

Sabbatical edict of Constantine, in A. D. 321."—Examination of the Six Tests, p. 291.

b. What do our best Encyclopædias say?

The Encyclopædia Britannica, after calling attention to the usual Scripture arguments, says: "Still, it must be owned that these passages are not sufficient to prove the apostolic institution of the Lord's day, or even the actual observance of it."—Art., Sabbath.

"Chamber's Encyclopædia" says: "By none of the Fathers before the fourth century is it identified with the Sabbath, nor is the duty of observing it grounded by them, either on the fourth commandment, or on the *precept* of Jesus or His apostles."—Art., Sabbath.

c. And what does orthodox theology say?

Buck's Theological Dictionary, p. 403, after presenting all the first-day arguments, says: "These arguments, however, are not satisfactory to some; and it must be confessed that there is no law in the New Testament concerning the first-day."

Kitto, speaking of the time of Chrysostom, A. D. 360, says: "Though in later times we find considerable reference to a *sort of consecration* of the day, it does not seem at any period of the church (ancient) to have assumed the form of such an observance as some modern religious communities have contended for. Nor do these in any instance *pretend* to allege any *Divine* command, or even *apostolic practice,* in support of it."—Cyclopædia of Biblical Literature, Art. Lord's Day;" Andrew's History of Sabbath, p. 363.

With these faithful and impartial records, for Divine truth, we leave this branch of evidence to proceed with the second part of this book.

IS THE EARTH A GLOBE?

PART SECOND

CHAPTER XIII.

Demonstrated Evidences that the Earth is Not a Globe.

WHEN producing the most infallible evidences in regard to unscriptural tenets or dogmas, which have long been held, and quite universally believed, notwithstanding the evidences and tests that may have been demonstrated by an axiom, and is virtually evident to the child of twelve years, we are met with something like this: "Why have not the savants of the world found this out before? Do you know more than all the wise men that have lived before you?"

We have no reputation as a philosopher, astronomer or a savant, to sacrifice. We have no stakes driven or anchor cast that we cannot take up for demonstrated truth, and facts evident to the degree of sense and reason that we possess.

It has been stated, and perhaps honestly supposed, that either the globular theory of the formation of the earth, or the earth a plane, could be proven and sustained by the Scriptures. But the infallible evidence that we have previously produced in the forepart of this work, is sufficient to silence any just entertainment of such an idea. "That no two facts or truths disagree," having been our motto, we, therefore, laid our foundation for proof of our position from the Scriptures in the forepart

of our work. We now start on this branch of the subject, with that which we believe to be the *true laws* of *science and mechanism,* and that which will be sustained by the infallible Word.

We have been taught that this earth is a globe, approximately 8,000 miles in diameter, consequently about 25,000 miles in circumference. This circumference *necessarily* forms a curvature of eight inches to the mile; this is accepted, and is the *acknowledged standard* by all surveyors, engineers, navigators and astronomers of the world, who believe the so-called Newtonian theory. This amount of curvature to the mile (on a circle of 25,000 miles), may be, and has been proven correct, not only by figures, but by draught or diagram. If it is desirable to demonstrate the matter by draught on a regular scale, we give the following for those who have not the knowledge or experience of a practical draughtsman: For the convenience of the mechanic, or anyone who may have a scale graduated to hundredths of an inch, let them strike one-fourth of a circle, which radius shall be forty inches; this represents one inch to every 100 miles, consequently, the hundredths on your scale represents the miles on your diagram. From the *center* draw a vertical and right angle parallel line to the periphery of the arc; you now have a geometrical quadrant of the circle; you now have a right angle whose two sides are forty inches each; next draw a tangent line from each end of the arc, and square the arc; you now have an arc forty inches square, the radius of which is equal to its sides, or forty inches. From the periphery of the arc run forty lines, one inch apart, vertical and horizontal to the edge of the square. This being done you have a diagram, which, if accurately drawn, gives the amount of curvature, or divergency from the vertical in miles. While this diagram does not give the fractional part of a mile on so small a

scale, yet it is quite satisfactory, in round numbers showing that the accepted system of calculating the curvature on a circle 25,000 miles is correct. Further on we give a scale less complicated that may aid in the construction of the above.

That about *three-fourths* of the surface of the *supposed globe* is water, we need not stop to prove. And so *sure* as this is the case, so sure the waters conform to that curve, and make *three-fourths* of the surface of the globe. Whether the waters are in a canal, ditch, lake, or ocean; whether a body of water one inch in depth, or three miles in depth, whether it is the weight of a feather, cobweb, or a thousand tons; whether it be at the *supposed* poles of the globe, where the motion could be *only half* the motion of the *hour-hand of the clock*, or one thousand miles an hour at the equator; all must conform to that curve, and those motions; all must be held in position by *the same attraction*, or force.

But before we speculate further, or multiply wonders, let us see if we can prove that *water has no curvature* or convexity. If we fail to do this, we fail of sustaining our faith and position. In order to get a straight line we must first get something that does not conform to any curve whatever, in any direction, in the least particle. Where, and what shall we take to test this matter? Happily, there are two things that can be demonstrated to be straight: the *rays of light* and the *line of sight*. If there remain the least doubt in regard to the first, take a straight stick and a lamp, and see if you can throw a shadow around the corner of a square box or cube. If, in regard to the second, there remain a question, just see if you can see around the corner of the house or over the top, by any device — try a crooked tube, if you please. We admit that reflection and refraction, either, may produce an image of a substance. But *not the real substance*.

Mr. Webster says that a "*straight line* is the shortest distance between two given points.' Grant it; and who can give a better definition? But it will be interesting to follow Mr. Webster a little in his definitions of his geometrical lines, and notice how "straight" he works. He defines a level thus: "Not having one part higher than another; even, flat, smooth, horizontal;....*a line everywhere parallel to the surface of still water.*" He also says, "It is a curve, the center of which *coincides* with the *earth's center*; a horizontal line or surface." (All waters conform to the *curve* of the earth's surface.) Here Mr. Webster calls a *level* a *curve* and conforms it to the supposed curve of the earth. Now, we will notice what Mr. W. says in another place, under the head of "curve," as especially giving a definition of the word: "A line of which no three consecutive points are in the same straight line." And who could give or ask a better definition? It is, without doubt, the evident conception of every intelligent mind in regard to a curve. But, Mr. Webster, you have just defined a level as not having one part higher than another; you also say it is a curve. We have no railings against the much-honored professor, but leave the matter for the time with the reader, to draw such conclusions as best he can. We venture to assume, however, that he has followed a hypothetical theory, taking things for granted without a demonstration. But these conclusions of Mr. Webster are inevitable to all who take the Newtonian theory; "that *even, flat, smooth, horizontal—a line or plane—is everywhere* parallel to *still water;*" and again he says: "A curve is a line of which no three consecutive points are in the same straight line;" viz., that *a straight line* or the shortest distance between two given points, is a curve, conforming to the curve of the earth! Then, Mr. Webster, we would ask which way,

or to what part of the earth, does a vertical line conform, drawn through the center of the supposed globe?

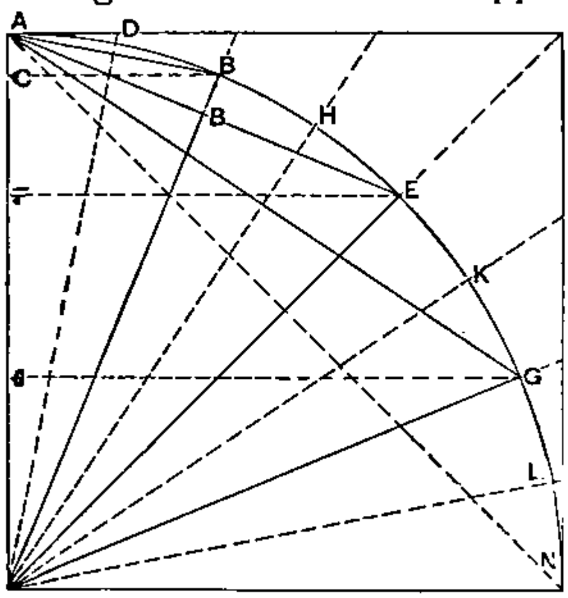


Fig. 6.

Figure 6 is a diagram and *proportionate scale*, showing the amount of divergency there would be circumnavigating a globe eight thousand miles in diameter, also the amount of convexity there would be above an air or straight line drawn from point to point on a globe.

We will now start at the left hand upper corner at A and go to B; we have certainly gone down to C on the vertical, and D is the chord of the arc, or the convexity existing between point and point—A and B. Again, start at A and go to E; we have descended to F on the vertical, and the convexity is B B' or one fourth of the distance from A to F. On the periphery of the arc the radiating lines are equally distanced apart, while A, C, F, J and the radiating point shows the actual amount of increase downward there would be in sailing around a globe whose poles are vertical, or even inclined, as claimed. At N, the equator, if sailing north or south the ship is vertical; if she changes her course, and sails at right angles with the ship's compass, she is then on beam's-end and at right angles from her former position.

By this scale we demonstrate to an *infallible certainty*—First: That the amount of divergency as we go from the prime vertical, is eight inches multiplied by the square of the distance. Example: Let 15 miles be the distance, 15x15=225x2=450 ÷ 3=150. (See table for curvature.) Second: That the amount of convexity between two given points on any

circle is, approximately, one-fourth of the divergency. (See diagram, fig. 6.)

The above rules are the accepted ones by scientists of the day, and for the first thousand miles the divergency or downward tendency increases at a greater *pro rata*, while the apex of the convexity or chord of the arc ever remains the same ratio to distance.

We will notice another standard work in regard to this straight and curved line theory. The Encyclopædia Britannica says: "The amount of curvature or diverging from the vertical increases as the square of the distances. That the curvature of the earth is eight inches for the first mile, thirty-two for the second mile, and so on." In other words, square the diameter, multiply the product by eight and divide by twelve, if you wish it in feet and inches. This formula is the accepted one throughout among navigators, astronomers, etc.

But we will just now inquire in regard to a *level.* "A line drawn at right angles, crossing the plumb-line (or vertical), and touching the earth's surface is a *true level* only in that particular spot; but if the line which crosses the plumb be continued for any considerable length, it will rise above the surface, and the *apparent* level will be above the true one."

Now, there are things that are *apparent* that are true, also things apparent and yet *untrue.* We shall, therefore, try to make demonstrated facts appear as such. As we have before alluded, there is a *standard* to which all intelligent people who have eyes, whether cross-eyed, nigh or far-sighted, may resort for proof, viz., the *line* of *sight* and the *rays* of *light* It is a fact which no astronomer, surveyor or engineer will deny or question, that the theodolite (telescope and level of the surveyor) conforms to and coincides with the *spirit level,* and these coincide with the line of sight, which *does not* conform to

the supposed curve of the earth or to any curve whatever, *apparent* or *unapparent*.

For the convenience of the readers of these pages we give a table which will show the amount of curvature, from one mile to one hundred, in feet and fractions thereof. The same may be found in any standard work on Geodesy or Geometry. To find the curvature in any number of miles not given in this table, square the distance by itself, multiply that product by 8 and divide by 12; the quotient is the curvature required. Another simple and short method is: Square the distance, of which the amount of divergency is required, multiply the product by 2 and divide by 3. Example, distance 20 miles: 20x20=400; 400x2=800; 800÷3=266⅔ feet, or 266 feet 8 inches. The hill or apex of curvation between point and point, as a matter of course, would be just one-fourth the amount of divergency downward from the vertical of the two points in question. (See also diagram and explanation, fig. 6.)

Table for Curvature of the Earth.

Miles Distance	Feet	Miles Distance	Feet
1	0. 8	30	600
2	0.32	40	1,066
3	6	50	1,666
4	10	60	2,400
5	16	70	3,266
6	24	80	4,266
7	32	90	5,440
8	42	100	6,666

We now offer a few facts which have been demonstrated, and may be repeated by anyone so disposed, that fully illustrate, and also corroborate the impossibility of convexity to water, or in short, of the earth's being a globe.

I have on my table a profile map of the canals of the state of New York, recently procured of the State Engineer and Surveyor, at Albany, N. Y. This map shows the elevation of the

water's surface and the length of each level, or distance between each lock on the Erie Canal, also the altitude of each level above tide water at Albany. Now, according to this State Survey (of which we know no negative question), there are two so-called "levels" of the following lengths, the longest level being sixty-two miles between the locks at Lockport and those at Rochester: The fall of water on the line of sixty-two miles is three feet in the entire level or cut, whereas if the earth were a globe 25,000 miles in circumference and the proper allowance be made for curvature, there would be a divergency from either end of the cut of 2,562 feet 8 inches, according to the accepted formula given, or diagram fig. 6; or the apex of the arc of that distance would necessarily be one-fourth that amount, equalling 640 feet, minus 18 inches, allowance not made for the three feet fall in the level.

The next longest level on the Erie Canal is between Syracuse and York Mills, and it is fifty-two miles without lock or gate; it is 428 400-1000 feet above the level of tide water at Albany, the altitude being the same at each end, and throughout the cut it is straight, on the bottom, conforming to the line of sight by the *surveyor's theodolite* and *transit level.*

There should be in the latter case (according to the Newtonian theory), a divergency in the fifty-two miles of 1802 feet 8 inches, or an intervening convex of 450 feet 8 inches.

Tests on Lake Erie.

I will now give my own experimental tests as to the convexity of the waters of Lake Erie. On July 4th, 1887, whilst standing on the bank of the Niagara River and near its mouth, I concluded that I saw a point of land, known as Lighthouse Point, on the south shore of the lake. My suppositions were questioned by some standing by, and I was informed by an old seaman that it was thirty miles to Lighthouse Point, and that

it lay by line of sight behind another prominent point, known as Sturgeon Point, the latter about 20 miles. Anxious to settle the matter beyond doubt, I took a pocket field or marine telescope, and in a few hours—about 10 A. M., via. L. S. & M. S. R. R.—I arrived at Silver Creek, a village of two or three thousand inhabitants, Lighthouse Point being about one-half mile from the railroad station or the village. I there found a Mr. A. E. Arnold, a civil engineer of the Nickel Plate Railroad, and engaged him to go out to the point, taking his two transits or theodolites, to take a level of the waters and make such observations and demonstrations as our instruments would furnish. As we reached the prominence and point extending into the lake, I discovered the smoke of some steam craft up the lake and just at the horizon line; the smoke was all that could be seen by the unaided eye. Before directing the large transit to the object, we went down from the elevation some twenty-five or thirty feet to the water's edge, and set the legs of the instrument in the water's edge, so that when leveled, the telescope stood about five feet above the water. As the instrument was directed, I said: "Have you got it?"

"Yes!" says Mr. Arnold.

"Does the *line* of *sight* intersect the water?" says a bystander.

"No;" was the reply of Mr. Arnold. (Previously to setting the telescope, Mr. A. had judged the vessel to be twenty miles or more distant.)

"How far do you now think the vessel is?" I asked.

"About ten miles," was replied.

"How far down would ten miles put the vessel?" I asked.

Ten miles would require a divergency of 66 feet, 8 inches, according to the formula. Mr. Arnold, seeing this, says: "How high are those propellers, Mr. Gleason?"

"About 60 feet from the water to the top of the smokestack."

"And yet you see the entire vessel from the top of the smokestack to the water beating against her bow. After making due allowance for the five feet of the transit above water, according to the formula we would not any more than see a *very small portion,* if any, of her smokestack. I don't understand it!" says Mr. A.

"Now, please direct the instrument to the Canada shore," said I.

This being done, I was invited to look through the leveled telescope; and as I now have before me a *Government Marine Chart,* giving all points and distances on Lake Erie, I give the same according thereto. From the point where we stood to the Welland Canal on the Canada shore is 22 miles, and from the same point of observation to the mouth of the Niagara River (my first starting point), is 27¾ miles. We could behold the land at intervals all along the Canada shore to the mouth of the Niagara River, or the northern portion of Buffalo. The land showing under the cross line of the telescope, indicating the same, as near as we could judge, on one shore as on the other—the sea being quite smooth, we could judge approximately. The line of sight, or point of compass, from the mouth of the Niagara to Silver Creek, or Lighthouse Point, is S. E. by I. E., and this line of sight lacks just one mile of *intersecting Sturgeon Point*—which has been suggested to me as a barrier preventing the sight of the point, but this is not the case.

An old and true adage is, "You cannot have two hills without a hollow." It is equally true that there cannot be two points on a *globe* without a hill or convexity between.

Again, according to the globular theory, also according to geometrical demonstrations by actual draught, in the twenty-

seven miles the line of sight from either end of the distance would strike the water at about five miles, should the parties stand at the water's edge, and run above the heads of each about 400 feet. (See diagram, fig. 7) It is true and obvious

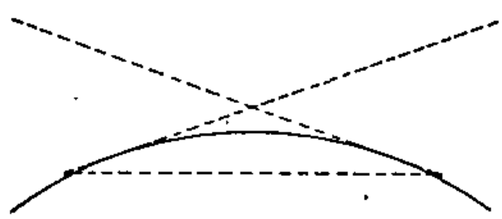


Fig. 7

to every practical draughtsman, that it is necessary in order to represent feet or even many miles of so large an object as the earth, that our diagrams cannot, in detail, be given correct, therefore, they are exaggerated, and some have accused us of doing this to mislead, but judge as you please, the plain figures will tell the truth, though the diagram may be only an illustration of our ideas.

Suez Canal, One Hundred Miles Level.

We will now look at the waters of the "Deep" where the "Spirit of God moved," and performed the first act of His Creation, so far as the earth is concerned, at least. (Gen. 1 : 2, 3.) "Where He founded and established it." Psalms 24: 2.

In the Encyclopædia Britannica there is an elaborate description of the "Suez Canal," with detailed maps, drawings, etc. This canal connects the Mediterranean Sea with the Gulf of Suez on the Red Sea, and furnishes a fair sample between *theoretical* and *practical engineering*. "The canal is 100 miles in length and without locks throughout the entire length, so that the waters within it are simply a connection and a continuation from sea to sea. The average level of the Mediterranean is said to be six inches above the Red Sea; yet the *flood tides* in the Red Sea rise some four feet above the highest, and its ebbs fall nearly three feet below the lowest in the Medditerranean." The *datum line* of the canal is twenty-six feet below the level of the Mediterranean, and is continued level, horizontal, from one sea to the other; and throughout the whole

length of the work, the surface of the water runs parallel with this *datum line.* This *datum line* is just what fixes the matter and establishes the difference between what science preaches and what she *cannot, nor dare practice.*

"A Book of British Standing Orders."

In the British House of Parliament, in London, is the following standing order, accompanied by a diagram, the only diagram in the book of Standing Orders.

"Ordered by Lords, spiritual and temporal in Parliament assembled,

"That the section be drawn to the same horizontal scale as the plan, and to a vertical scale of not less than one inch to every 100 feet, and shall show the surface of the ground marked on the plan, the intended level of the proposed work, the height of every embankment, and the depth of every cutting, and a *datum* horizontal line, which shall be the same throughout the whole length of the work, or any branch thereof, respectively, and shall be referred to some *fixed point* stated in writing on the section, near some portion of such work, and in the case of a canal, cut, navigation, turnpike or other carriage road or railway, near either of the termini."

But why, my Lords, this "Standing Order?" It seems that the inference may be a just and conclusive one, that at some previous date engineers or surveyors have made a bad job by allowing for *curvature*, and in so doing it has taught their lordly science a lesson from which this *legal standard* is established. *True theory* and practice run very close together, but here we notice that *education* (experimental) has forbidden, by law, the two to blend. Let us imagine for a moment what the result would have been in the case of the cut of the Suez Canal had they followed the fondly-cherished Copernican theory. In order to properly illustrate this matter of curvature we have made the following diagram:

Let the arc from B to B, in figure 8, represent the 100 miles, length of the canal. In the 100 miles we have gone down 6,666 feet 8 inches. The chord of the arc would be 1,664 feet between A and C C.

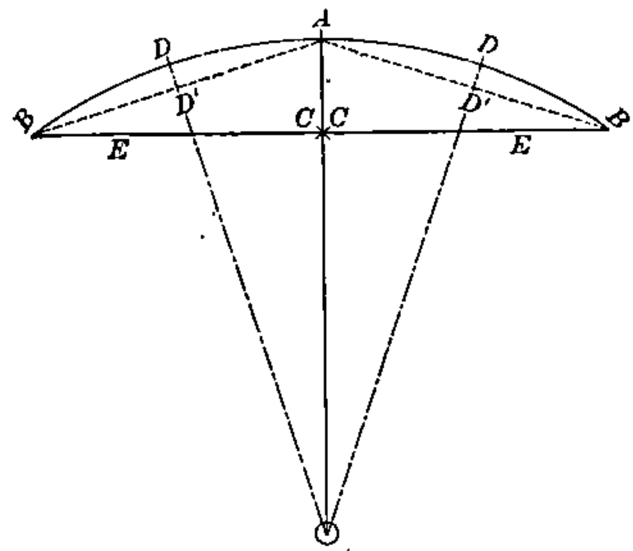


Fig. 8.

Now, we will start in the middle of this work at A and go either way to B, and it is evident, beyond the shadow of a doubt, that we have descended on the vertical from A to C C, and made a cut or hole in the earth 1,666 feet at either end of the arc B B, and from D to D is the chord and apex of the arc, showing a convexity of one-fourth of the divergency, or 414 feet in the 50 miles from A-B.

To speak without exaggeration, a thousand parallel cases might be given, but if we let hypothetical theory run away with our senses, then demonstrated facts have no bearing on the point.

We are satisfied that we have abundantly proven that the *earth is not a globe;* yet, we would not like to ignore some of the most commonly *supposed* reasons and *alleged* demonstrated facts to the contrary.

In "Elements of Astronomy," by Lockyer, p. 82, published by Appleton & Co., 1883, is an illustration of five vessels

at various distances from the shore to the horizon line and beyond, as shown in the first diagram following. This he gives to *demonstrate* the globular shape of the earth. He says: Moreover, if we watch ships putting out to sea, we loose first the hull, then the lower sails, until the highest part of the *masts* disappears. If the surface of the earth were flat, or an extended plane, this would not be so."

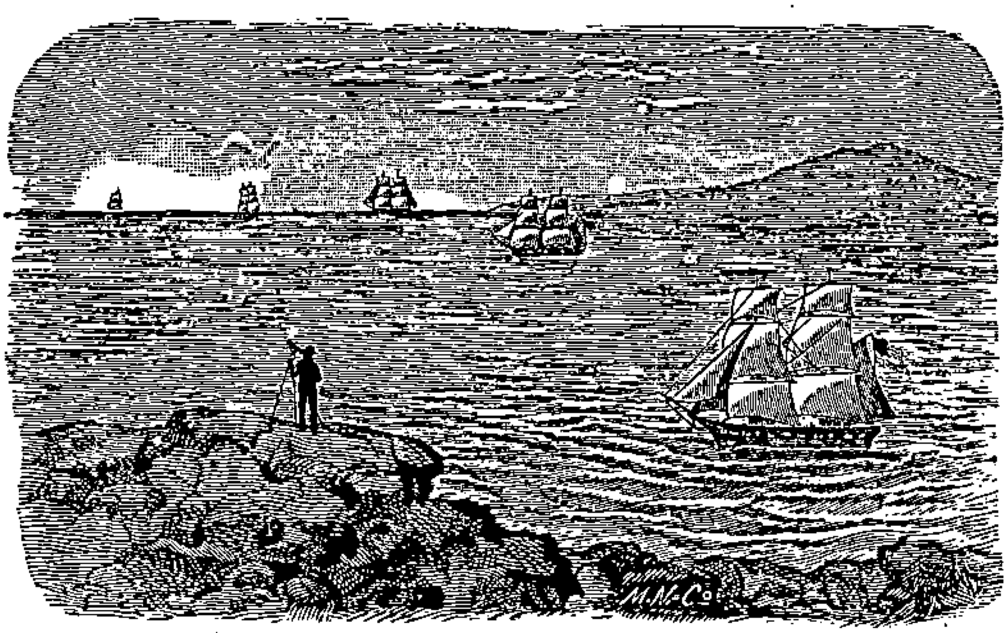


Fig. 9.

We would not like to flatly deny what Mr. Lockyer may see with his *theoretical* vision, and thousands of others who never gave the matter a *demonstrated* test. Yet, we can give our testimony as one who has been only about two years a seafaring man; and since that time our attention having been called to the practical demonstration of the matter, we have always been able to behold the *sails* at a greater distance than we could see the *masts*. If we divide a circle into 360 degrees, the usual and accepted rule, the "angle" from the parallel or vertical from the center to the circumference is the same, regardless of the diameter of the said circle; though the farther we go from the center the greater the divergency of the lines

from each other or wider the space. We make these remarks for the benefit of those who are not acquainted with geometrical terms and facts. Now, the *angle* or *diminution* of our vision, or that of the *average* eye is about the same as that of one degree, or about the same ratio or angle of a degree. To further demonstrate the theory, stand in the *middle* of a railroad track, where the track is straight for one mile, and though it be up-grade, you will find the rails appear to meet at a mile or less; this will fairly illustrate the convergency and diminution of sight.

One thing let us notice and bear in mind: The horizon line is ever on a level with the eye, as will be illustrated further on; and as we are viewing a vessel from the shore we are lifted

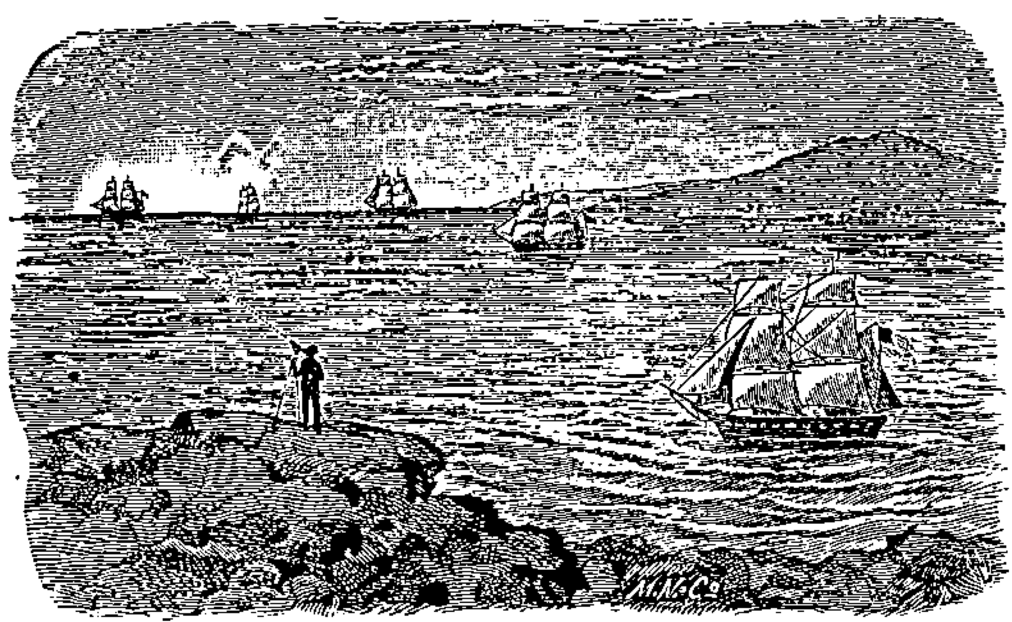


Fig. No. 10.

up from the level of the waters, and between us and the horizon line in the distance is the dark blue water, as a background covering the vessel's hull, and as the sky, when clear, is lighter than the water, it furnishes a background on which the outlines of the objects are more distinguishable than the waters which are ever below the horizon—the level of the eye.

This cut is no exaggeration of the view of the vessel on the *horizon* by the *telescope.* We have in company with others watched the vessel receding until it had *entirely disappeared,* and with a field or opera glass partially restored it to sight, and at the same time have used the telescope of forty powers which would restore the vessel to the water's edge. WERE THE EARTH A GLOBE THIS WOULD NOT BE SO! But what is the matter with Mr. Lockyer's theory? Yea, the Copernican or Newtonian entire? All say that the vessel has gone over the *hill* and disappeared. Now, what has the telescope done? Has it brought the vessel nearer to us, or has it taken us nearer to the vessel, or has it enabled us to look over the *hill* or *around* the *corner?* In other words, has it not simply lengthened out our vision? I prefer to believe the latter.

But one more illustration with the telescope: we go out of a starry night, we behold the seven stars; we put the telescope to our eye and within the radius of the *seven stars*—if our telescope is a powerful one—there are more stars than we are able to count, or at least we are not able to distinguish the *seven* from the multitude. Again, what have we proven by this? Simply, that we have extended our short vision to meet the focal or vanishing point of the stars whose rays lacked a few miles of reaching our vision, or that part of the earth that we inhabit. Will we still believe there is a hill between us and the vessel?

Another oft-repeated and supposed objection to the earth being a plane is the following, by Mr. Lockyer, p. 83: "Again, the roundness of the earth has been proved by navigators, who, sailing in one direction, east or west (as nearly as the different bodies of land would permit), have returned to the place from which they set out." This, to my mind, is about the weakest point that I ever observed in a *so-called* scientist; a publisher

and writer of astronomical school books. Mr. L. knows, or should know, that navigators on the great seas sail by a compass which ever points to the North Center and the South Circumference. He should know that if he stands with his back to the North Pole or center, that his face is to the *South Circumference,* no matter where on the earth or seas he may be, whether in South America or Asia. Now, in sailing or traversing the earth by a *compass, east* or *west,* you would keep your course by keeping at right angles with the compass, whose attraction point is ever north; and is it any more unreasonable to expect that you would arrive at the same place in going either way, if you continue on the same latitude or the same distance from the center, than it would be to expect that if you take a mechanical compass, on a flat board or square block, to scribe a circle? go either way, you arrive at the same point. The point or object that is movable simply goes around a center, regardless of the shape of that on which it moves. But should the navigator start south from *any part* of the earth, and continue his journey, what would be the terminus? It would be the everlasting bounds of ice. No navigator ever went farther, or even as far as 80° south. The magnetic current and attraction of the earth and seas is to the aerial or geographical center of the earth and seas, and *not* 4,000 miles beneath our feet. This we shall endeavor to demonstrate more fully further on.

We will return to Mr. Lockyer, on page eighty-three, article on "*Sensible Horizon.*" "On all sides of us we see a circle of land, or sea, or both, on which the sky seems to rest; this is called the *Sensible Horizon.* If we observe it from a little boat on the sea, or from a plane, this circle is small; but if we look out from the top of a ship's mast, or from a hill, we find it greatly enlarged—in fact, the higher we go the more is the horizon extended, always, however, retaining its circular

form. Now, the *sphere* is the *only figure* which, looked at from an external point, is bounded by a *circle*; and as the horizons of all places are circular, the earth is a sphere, or nearly so." We have given the entire paragraph; we shall now see how much of it is "SENSIBLE," and HOW MUCH IS NOT LOGICAL OR TRUE.

Limit of Vision and Horizon Considered.

On our next page we show a diagram, fig. 11, by which we illustrate the extent of vision. First, it will be conceded, and borne in mind, that there is a limit to the *vision*, and a limit to every light that ever shone. *Every person stands in the center of his own vision, and under his own zenith;* he can see just as far one way as he can the other, there being no obstructions; the length of the vision is varied to some extent by the conditions of the atmosphere. Now, we ask what it is that really constitutes our *horizon*? Why are we always encircled, as it were, in a spherical dome or semi-circle? Simply because our vision scribes it; it is the *end* of *our vision*, nothing more, nothing less. The *scope* of the vision is about 60°, the angle or diminution about one degree, as heretofore stated; therefore, the vision must have a focal or vanishing point. The horizon, then, is *formed* by the end of our vision, and the obstruction of our vision by the land or seas. And further, this "*sensible*" horizon has no more significance to the earth's being a globe or sphere, than the hands of the clock, or the scribing of a circle with the ordinary mechanic's or mathematician's compass.

Mr. L. also states that "the higher we go, the more is the horizon extended." This will also prove to be a false conception by considering the diagram fig. 9. The testimony of every aeronaut is, that as they arise from the earth, the earth seems scooped out, or concave, in the room of convex, as it should be, were Mr. Lockyer's theory true.

We will now start with the man in the balloon, fig. 11. His horizon is represented by the dotted line from the balloon to A and 6 is his zenith; he rises to 2 on the vertical line, the length of his vision is just the same; his horizon is E and it has

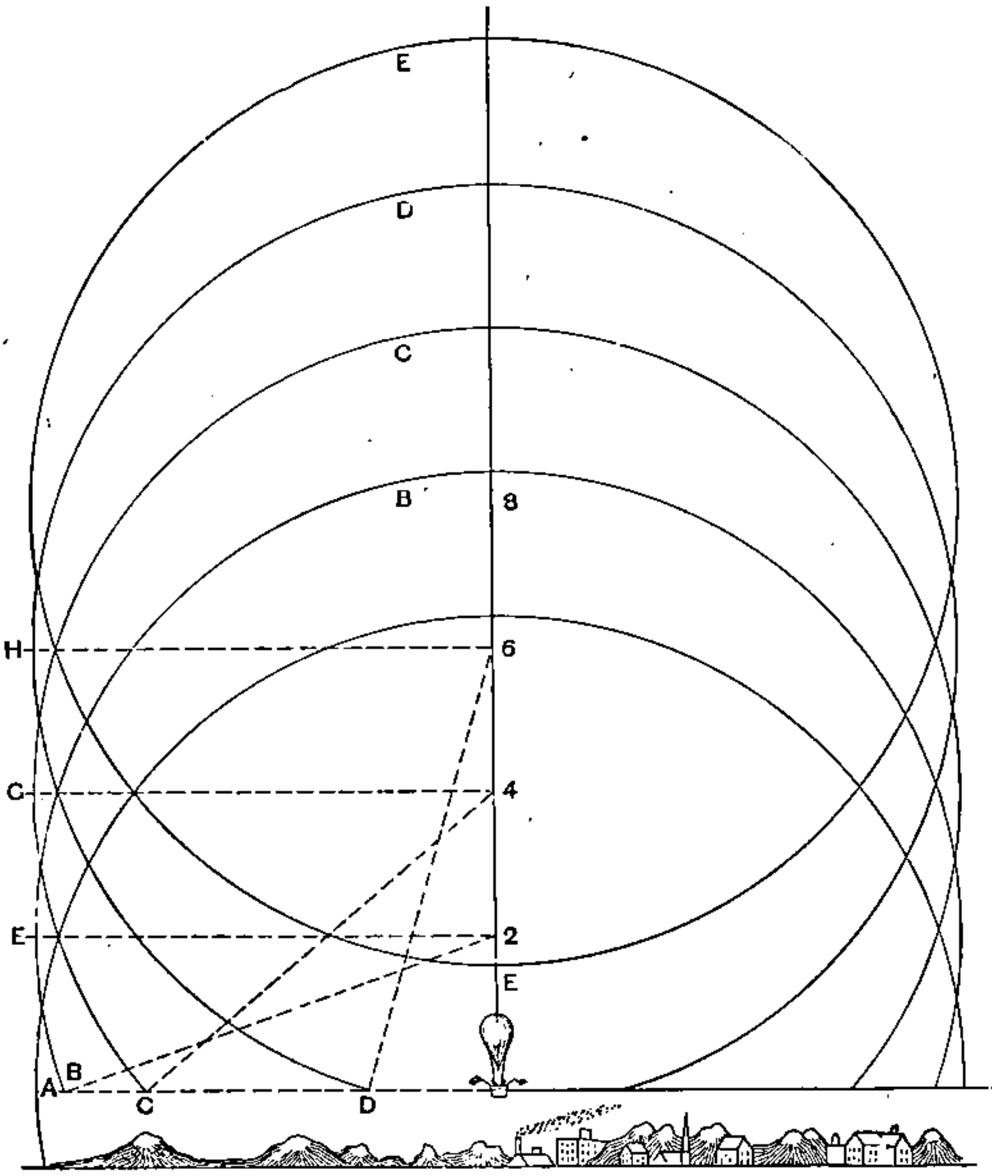


Fig. 11.

drawn in to B; he arises to 4, his horizon is G, and his sight or original horizon has drawn in to the junction of C and A; he next arises to 6; his horizon is H, his zenith is D; his *horizon* is H, and his original horizon has drawn in to the junction of D A. Now, would the atmosphere admit of the possibility of ascending to 8, he would be out of sight of the earth; his

zenith would be the same distance as ever, yet there would be nothing to distinguish his horizon, in fact, he now has none, but he is in the radial center of his vision as usual, with sky *all around* him.

But a few words in regard to seeing objects "better the higher we go." This is true to a *limited extent only*. As we rise from the earth we change the angle of our vision relative to things on earth or sea, but we see no farther, unless by rising we get above objects that obstruct. The horizon is ever the *same* distance to the *same* unaided eye, in all places, wherever you are, and under the same conditions of atmosphere.

Every individual who is blessed with natural vision, has, so to speak, an *orbit* to that vision; that orbit is not an eclipse, but a perfect sphere, and so is every light that ever shone. It will be interesting to observe the testimony of a few noted aeronauts on this subject, believing that those who have had demonstrated *optical views* of the earth when at an altitude above the clouds, would be as good judges of the appearance of the earth beneath them, as those who have sat in their official chair and written a flowery essay upon the appearance of the heavens and the earth. Doubtless, this may be to the satisfaction of themselves and our school-boy days, but all this is not quite satisfactory to him who requires demonstrated evidence of these things.

The Apparent Concavity of the Earth as Seen From a Balloon.

"A perfectly formed circle encompassed the visible planisphere beneath, or rather the concave-sphere it might now be called, for I had attained a height from which the earth assumed a regularly hollowed or concave appearance — an optical allusion which increases as you recede from it. At the greatest elevation I attained, which was about a mile and a half, the appearance of the world around me assumed a shape

or form like that which is made by placing two watch glasses together by their edges, the balloon apparently in the central cavity all the time of its flight at the elevation." — Wise's Aeronautics.

"Another curious effect of the aeria. ascent was that the earth, when we are at our greatest altitude, positively appeared *concave*, looking like a huge dark bowl, rather than the convex sphere such as we would naturally expect to see..... The horizon always appears to be *on a level with our eye*, and seems to *rise as we rise*, until at length the elevation of the circular boundary line of the sight becomes so marked that the earth assumes the anomalous appearance, as we have said, of a *concave* rather than a convex body." — Mahew's Great World of London.

"The chief peculiarity of a view from a balloon at a considerable elevation, was the altitude of the horizon, which remained practically *on a level with the eye*, at an elevation of two miles, causing the surface of the earth to appear *concave*, instead of *convex*, and to recede during the rapid ascent, whilst the horizon and the balloon seemed to be stationary." — London *Journal*, July 18th, 1857.

Mr. Elliot, an American aeronaut, in a letter giving an account of his ascension from Baltimore, thus speaks of the appearance of the earth from a balloon:

"I don't know that I ever hinted heretofore that the aeronaut may well be the most sceptical man about the rotundity of the earth. Philosophy imposes the truth upon us; but the view of the earth from the elevation of the balloon is that of an immense terrestrial basin, the deeper part of which is that directly under one's feet. As we ascend, the earth beneath us seems to recede — actually to sink away, while the horizon gradually and gracefully lifts a diversified slope, stretching

away farther and farther to a line that, at the highest elevation, seems to close with the sky. Thus, upon a clear day, the aeronaut feels as if suspended at about an equal distance between the vast blue oceanic concave above the equally expanded terrestrial basin below."

During the important balloon ascension, recently made for scientific purposes, by Mr. Coxwell and Mr. Glaisher, of the Royal Observatory, Greenwich, the same phenomenon was observed.

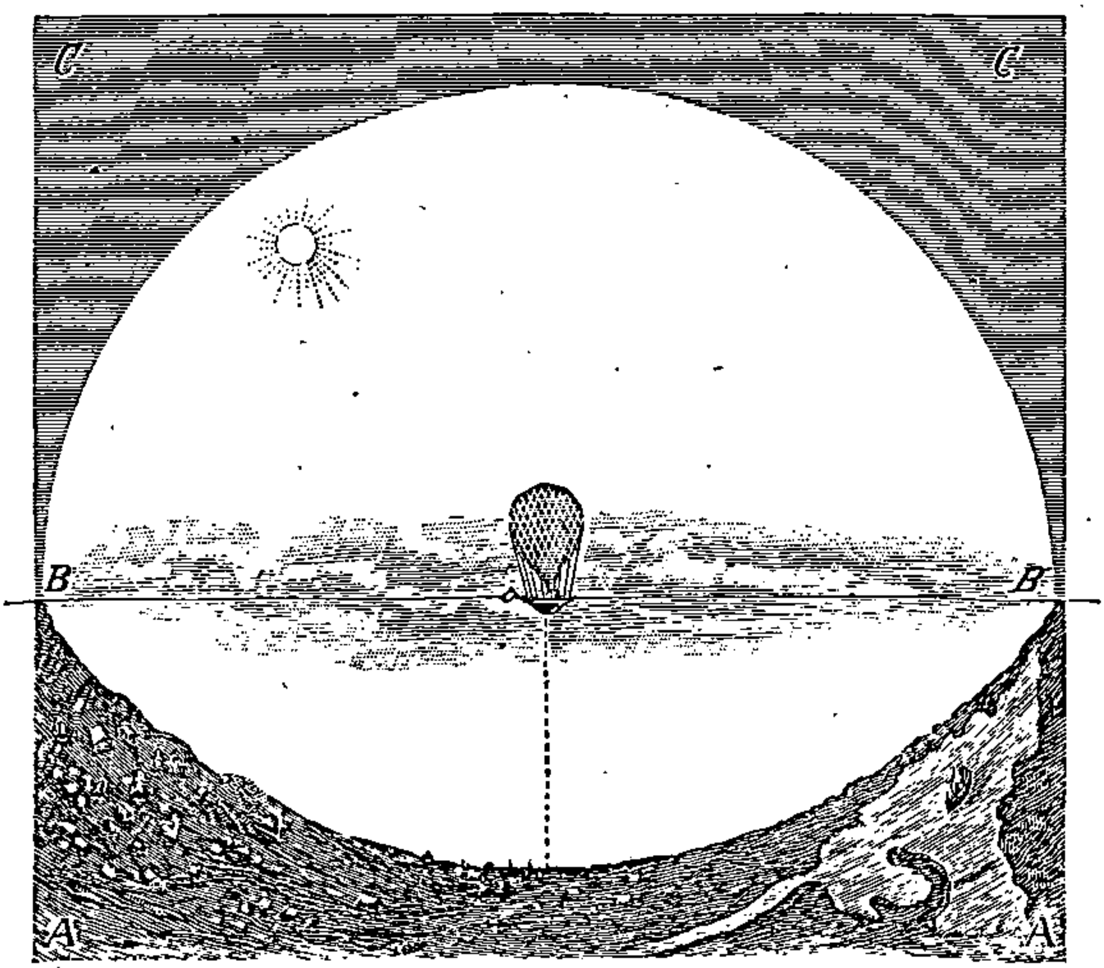


Fig. 12.

"The horizon always appeared on a level with the car." — See Mr. Glaisher's report, in Leisure Hour for October 11 1862.

"The plane of the earth offers another delusion to the

traveler in the air, to whom it appears as a *concave* surface, and who surveys the line of the horizon as an unknown circle, rising up, in relation to the hollow of the concave hemisphere, like the rim of a shallow inverted watch glass, to the height of the eye of the observer, how high soever he may be, the blue atmosphere above closing over it like the corresponding hemisphere reversed."—Glaisher's report, in Leisure Hour, for May 21, 1862.

The appearance referred to in the several foregoing extracts is represented in the foregoing diagram; and with the exception of the cuts, which are our own, may be found in "Zetitic Astronomy," by Parallax, pages 36-38:

The surface of the earth A A appears to rise up to the level of the observer in the car of the balloon and at the same time, the sky C C seems to descend and to meet the earth at the horizon B B.

The above is the universal testimony of all aeronauts we have ever read; and we have several others. But we will not annoy with over-abundance of testimony, but will stop by asking the reader how he thinks the above statements harmonize with Mr. Lockyer's *theoretical* vision?

But we have not yet got ready to abandon this balloon ascension; it furnishes good evidence in regard to the *convexity question*. We have stopped in the midst of the subject and made a correct diagram, that we might illustrate the matter with certainty. In the following scale, the one-fiftieth (1-50) of an inch, represents a mile; both in altitude and circumference, relative to a globe.

Let A O o represent the prime vertical of a globe; D D′ represents a right angle from the vertical. The man in the balloon has ascended from D on the vertical line, two miles, to the arrow point 1. In order to look over the earth,

the line of sight from the balloon would strike the earth at arrow points 5 and 3; therefore, the horizon would be just 170 miles distant, and in the place of being on the level with the eye of the observer in the balloon, from arrow points 1—2, as previously stated by the aeronauts. We find Mr. Lockyer's "*Sensible Horizon,*" by looking on the line of E—E′, arrow points 5 and 3, 19,266 feet 8 inches below the starting

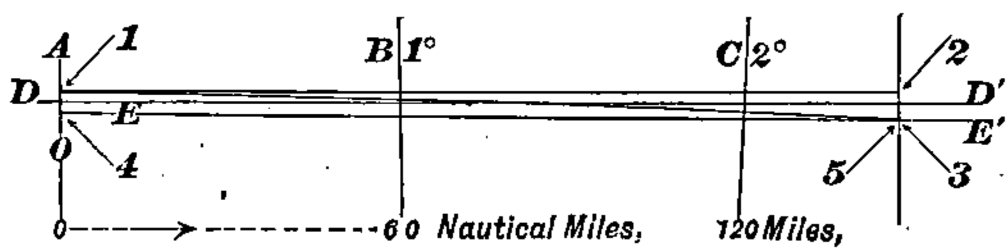


Fig. 13.

point at D—D′, and about *five* nautical miles; (a nautical mile is 6,075 feet); therefore, we multiply 6,075x5 and it gives 30,375 feet as the actual difference between the actual observers, and the *Ideal Vision* of a *Sensible Horizon.*

In view of the above facts and hundreds of others that we have examined and might be brought forward, we are forced to say that so far as the earth and seas are concerned, the convexity sought for cannot be found; for lo! *it does not exist.*

A few more thoughts may be worthy of consideration in regard to the law of perspective. It will be obvious to the thoughtful mind that *space* diminishes with the objects as they recede in distance. The two rows of lamp lights in some of our long streets in Chicago and other cities, will appear to converge at a distance of two miles or less, owing to the width of the street. Now, we are apt to forget that this diminution of our vision decreases at the same ratio *vertically* as it does *horizontally.* The closer two objects, or more, are to each other,

the sooner they become *one* in appearance as they recede in distance. Again, let us remember that the vessel's hull when at sea is on and a part in the water; which, together with the focal and vanishing point of vision, constitutes our horizon line, and is the absolute termination of our vision in that direction; therefore, just as fast as that body (the hull of the vessel) continues to recede, just so fast that hull will continue, little by little, to disappear—always the lower portions of the vessel first. Let diagram fig. 14 illustrate:

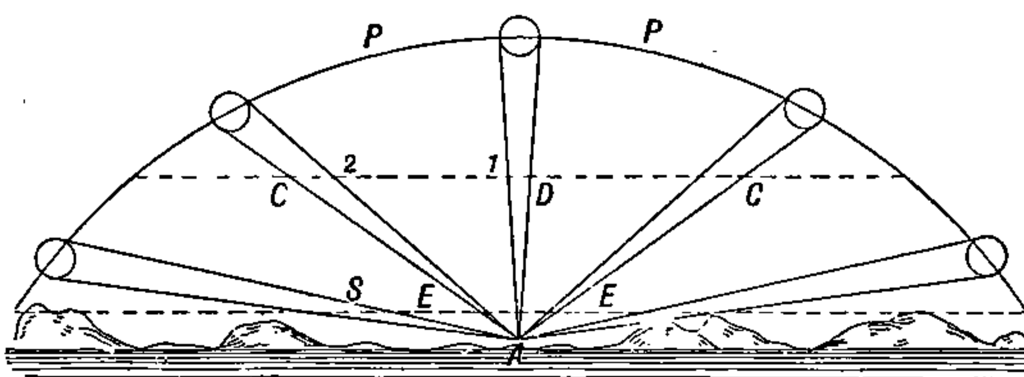


Fig. 14.

Let A represent the surface of the earth, and E E the lower strata of atmosphere; C D C the upper strata, and P P the arc of the heavens. The observer at A is in the center of his own vision, and he sees the rising and setting sun's rays, obliquely, and through a greater amount of atmosphere at S E E than at 1 and 2, or at any other points on the diagram.

However, there are conditions of atmosphere that must be taken into consideration with these thoughts as well as the conditions of the optical vision of the beholder. At the earth or on the sea the air is more aqueous; particles of vapor in solution are in componant parts of greater quantity than at a high elevation. This is one of the reasons why an object is to be seen at a greater distance from our high latitudes, as in mountainous

countries, than they otherwise would be. In all very high altitudes sight is conveyed to a greater distance, but *sound* much less. For instance, Pike's Peak which is 14,147 feet above the level of the sea, is seen from Denver or that vicinity, the latter of which is some eight or nine thousand feet above the level of the sea, and according to the railroad time and distance tables, it is eighty-two miles from Pike's Peak. Yet, we are told by travelers on those railroads that Pike's Peak is seen at a distance 130 to 150 miles from other very high peaks, and this is reasonable with the law of perspective when the different altitudes are taken into consideration with the rarefied atmosphere through which they look.

Bayard Taylor gives an account of an ascent made in some of the mountains of Europe, by himself and escort, to an altitude of so little or light an atmosphere, "that it was," says he, "with *difficulty* that we could hear the report of a *revolver fifteen feet;* at that demonstratation we made haste our retreat for blood oozed from the pores of the skin, at the lips and nostrils."

Again, we are asked, why does the sun look so much larger at sunrise or sunset, than he does at noon? If he is ever the same distance from the earth, why should he not appear the same size, or even less? The foregoing will explain.

The Horizon Line, by Dr. Wm. Hobotham.

"The author has seen and tested this apparent rising of the water and the sea horizon to the level of the eye, and to an eye-line at right angles to a plumb line, from many different places — the high ground near the race course at Brighton in Sussex; from the several hills in the Isle of Wight; various places near Plymouth, looking towards the Eddystone lighthouse; the 'Steep Holm' in the Bristol Channel; the Hill of

Howth, and 'Ireland's Eye,' near Dublin; various parts of the Isle of Man; 'Arthur's Seat,' near Edinburgh; the cliffs at Tynemouth; the rocks at Cromer, in Norfolk; from the top of Nelson's monument, at Great Yarmouth, and from many other elevated positions. But in Ireland, in Scotland, and in several parts of England, he has been challenged by surveyors to make use of the theodolite, or ordinary 'spirit level,' to test appearance of the horizon. It was affirmed that, through this instrument, when 'leveled,' the horizon always appeared *below the cross-hair*, as shown in fig. 15, C C the cross-hair and H the horizon.

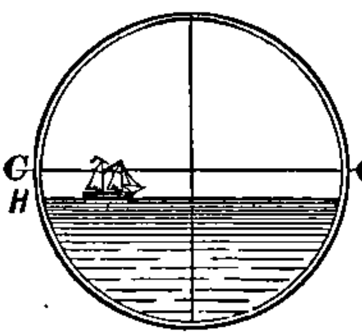


Fig. 15.

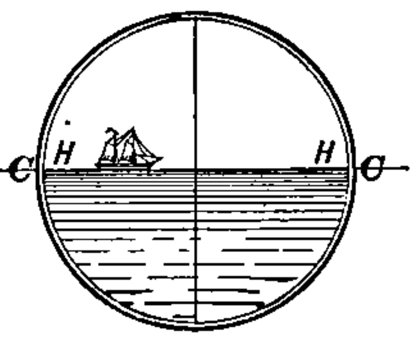


Fig. 16.

"In every instance when the experiment was tried, this appearance was found to exist; but it was noticed that different instruments gave *different degrees* of horizontal depression below the cross-hair. The author saw at once that this peculiarity depended upon the construction and adjustment of the instruments. He ascertained that in those of the very best construction and of the most perfect adjustment, called technically 'collimation' there was a slight divergence of the rays of light from the axis of the eye, on passing through the several glasses of the theodolite. He therefore obtained an iron tube about eighteen inches in length, one end was closed, except a very small aperture in the center, and at the other end cross-hairs were

fixed. A spirit level was then attached, and the whole carefully adjusted. On directing it, from considerable elevation towards the sea, and looking through the small aperture at one end, the cross-hair at the opposite end was seen to cut or to fall *close to the horizon,* as shown at fig. 16. (H H.) This has been tried in various places, and at different altitudes, and always with the same result; showing clearly that the horizon is visible below the cross-hair of an ordinary leveling instrument and is the result of *refraction* from looking through the various glasses of the telescope; for on looking through an instrument in every respect the same in construction, except being free from lenses, a different result is observed, and one precisely the same as that seen from a balloon from any promontory, and especially in the experiment at Brighton."

In order to verify the above statement, the author of this book procured a surveyor's leveling instrument of Mr. Henry Lyon, of Buffalo, and then procured permission of the city officers, or those in charge of the City Hall, to ascend to the roof, the hall being one of the highest buildings in Buffalo; the top of which is over 150 feet above the level of the lake (Lake Erie at the mouth of Niagara River) and affording a fine view of the city and of Lake Erie to the utmost extent of the vision. Here upon the roof (it being a flat roof or nearly so) I placed and adjusted the instrument and swung it to the sea, and observed a space of about one-eighth (⅛) of an inch between the horizontal line of the instrument and the horizon proper, as shown in fig. 15. I next swung the line of sight to the Canada shore, and found the line cut the tops of some of the *very highest trees.* Knowing that the Canada shore, at the point to which I directed the leveling instrument, was fully equal, if not higher than the ground on which the City Hall stood, I felt pretty sure that the instrument was in good adjustment; because I was looking across a

body of water to a point of land, some ten miles or more distant. Having previously been upon, and past the said point of land by water, I could judge approximately as to its relative height above the water.

I next went down from the City Hall roof and went to the foot of Georgia street, about as near the level of the water as I could conveniently get, and there adjusted the instrument a second time. When leveled I found that the cross-hair or horizontal line of the level struck the banks of the lake at intervals along the Canada shore to the terminus of the point of land before mentioned, but, as I swung the level to the horizon line formed by the sea and sky, I could not distinguish any difference in the space existing between the cross-line and the horizon from near the water's edge, than that carefully observed at the top of the City Hall.

This not only confirms and agrees with Dr. Hobotham's statements, but those of the writer, illustrated by fig. 11 on page 281, and in fact, every other demonstration made. Next, in order to establish, as well as to put this horizon line question beyond the shadow of a doubt, we procured of the mathematical instrument maker a cited and graduated level, having *no lens*. We then repaired to the lake shore near the city water works, there being a bluff at that point of about sixty feet above the lake and harbor. Here we set our level and found it to cite exactly on the horizon line at sea. We next entered the city water works—being connected therewith an observatory of some fifty feet more elevation. From this elevation, at last, to speak safely, we were 100 feet above the water level; and here we find the level, when accurately adjusted, to point directly on the horizon line. I think that the majority of scientific engineers and coast surveyors understand this rise of the horizon line; but I am surprised to find so few, if ever an one

inland surveyor, that *really understood* that the center of his vision, both vertical and horizontal, was the axis of his eye. And yet, I am more surprised to find such men as Lockyer, who are considered scientific authority, saying: "Now the sphere is *the only figure* which looked at *from any point* is bounded by a circle [and notice his illogical conclusion], and as the horizons of all places are circular, the earth is a sphere." See Lockyer's Astronomy, p 83. parg. 161.

These comparative experiments cannot fail to satisfy any unbiased observer, that in every leveling instrument *where lenses are employed,* there is, of necessity, more or less divergence of the line of sight from the true or normal axis, and that however small the amount—perhaps inappreciable in short lengths of observation—it is considerable in distances of several miles. Every scientific surveyor of experience is fully aware of this, and other peculiarities in all such instruments, and is always ready to make allowances for them in important surveys. As a still further proof of this behavior of the telescope or leveling instrument, the following simple experiment may be tried: Select a piece of ground—a terrace, promenade, line of railway, or embankment, which shall be *perfectly horizontal,* for say; five hundred yards. Let a signal staff, five feet high, be erected at one end, and a theodolite or spirit level fixed and carefully adjusted to exactly the same altitude at the other end. The top of the signal will then be seen at a little *below the cross-hair* although it has the *same actual altitude,* and stands *upon the same horizontal foundation.* If the position of the signal staff and the spirit level be then reversed, the same result will follow.

Another proof will be found in the following experiment: Select any promontory, pier, light-house gallery, or small island, and, at a considerable altitude, place a smooth block of

wood or stone of any magnitude; let this be "leveled." If then, the observer will place his eye close to the block of wood, and look along its surface towards the sea, he will find that the line of sight will *touch the distant horizon.* Now, let any number of spirit levels or theodolites be properly placed, and accurately adjusted, and it will be found that, in every one of them, the same sea horizon will appear in the field of view considerably *below* the cross-hair; thus proving that the telescopic instrumental readings are not the same as those of the naked eye.

Dr. Hobotham continues:

"In a work entitled 'A Treatise on Mathematical Instruments,' by J. F. Heather, M. A., of the Royal Military College, Woolwick, published by Weale, High Holborn, London, elaborate directions are given for examining, correcting and adjusting the collimation, etc., and at page 103 of the above-named work, these directions are concluded by the following words: 'The instrument will now be in complete practical adjustment for any distance not exceeding ten chains (220 yards), the maximum error being only 1–1000 of a foot.'

"At this stage of the enquiry two distinct questions naturally arise. First, if the earth is a plane, why does the sea at all times appear to arise to the axis of the eye? And secondly, would not the appearance exist if the earth were a globe? It is a simple fact that two lines running parallel for a considerable distance will, to an observer placed between them at one end, appear to converge or come together at the other end. The top and bottom, and sides of a long room, or an equally bored tunnel, will afford a good example of this appearance; but perhaps a still better illustration is given by the two metallic lines of a long portion of any railway.

"In fig. 17, let A B and C D represent the two lines of a straight portion of horizontal railway. If an observer be

placed at G he will see the two lines apparently meeting each other towards H, from the following cause: Let G represent the eye, looking first, as far along as figures 1 and 2; the space between 1 and 2 will then be seen by the eye at G, under the angle 1 G 2. On looking as far as figures 3 and 4 the space between 3 and 4 will be seen under the diminishing angle 3 G 4. Again, on looking forward to the points 5 and 6, the

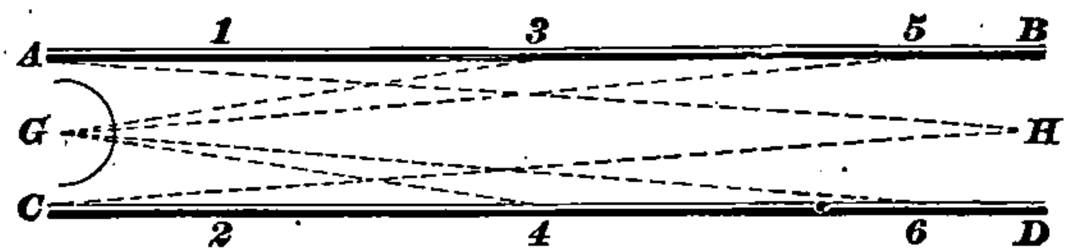


Fig. 17.

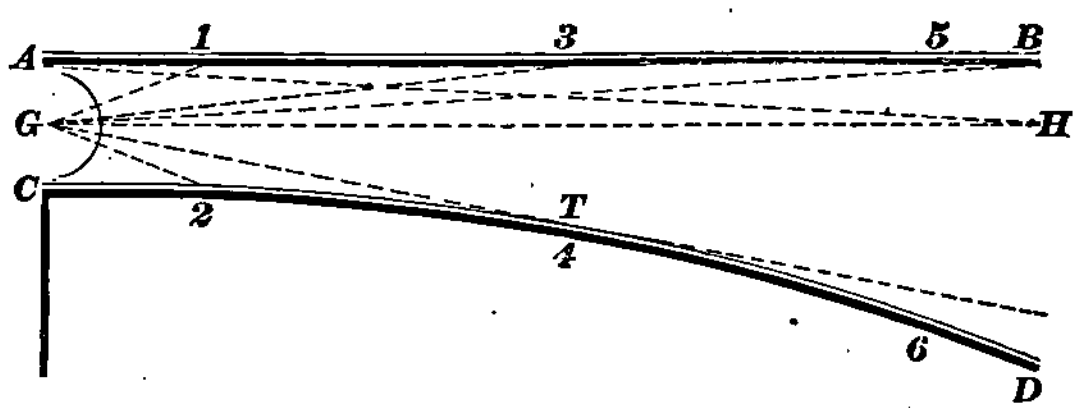


Fig. 18.

space between the rails would be represented by the angle 5 G 6; and, as will at once be seen, the greater the distance observed, the more acute the angle at the eye, and therefore the nearer together will the rails appear. Now, if on these rails should be an arc of a circle and diverge from the other, as in

the diagram fig. 18, it is evident that the effect upon the eye at G would be different to that shown by the diagram fig. 17. The line G 4 would become a tangent to the arc C G, and could never approach the line G H nearer than the point T. The same may be said of lines drawn to 6, opposite 5, and to all greater distances — none could rise higher than the tangent point T. Hence, allowing A B to represent the sky and C D the surface of the water of a globe, it is evident that A B could appear to decline or come down to the point H, *practically* to a level with the eye at G; but that C D could never, by the operation of any known law of optics, *rise to the line of G H,* and therefore, any observation made upon a globular surface, could not possibly produce the effect observed from a balloon, or in any experiment like that represented in figs. 12 and 13. (The man in the balloon.)

"From the foregoing details the following arguments may be constructed:

a—Right lines, running parallel with each other appear to approach in distance.

b—The eye-line, and the surface of the earth and sky run parallel with each other.

c—*Ergo;* the earth and sky appear to approach in the distance.

d—Lines which appear to approach in the distance are parallel lines.

e—The surface of the earth appears to approach the eye-line.

f—*Ergo,* the surface of the earth is parallel with the eye-line.

g—The eye-line is a right line.

h—The surface of the earth is parallel or equi-distant.

i—Ergo, the surface of the earth is a *right line*—a plane. [Not a globe, nor sphere or speroid.]

The Sun's Motion, Concentric With the Polar Center.

"As the earth has been proved to be fixed (See cut fig. 3), the motion of the sun is a visible reality. If it be observed from any latitude a few degrees north of the line called the 'Tropic of Cancer,' and for any period before or after the time of southing, or passing the meridian, it will be seen to describe an arc of a circle. The following simple experiment will be interesting as demonstrating the fact that the sun's path is concentric with the center of the earth's surface: Let the observer take his stand a few minutes before sunrise (in the month of June, or any of the summer months will be better than winter, as the results will be more striking), on some elevated point, where he can see a clear horizon line east and west. Let him draw a line due north and south; and a second line due east and west, across the first. Now stand with his back to the north. Being thus at his post and ready for observation, let him watch carefully for the sun's first appearance above the horizon, and he will find that the point where the sun is first observed is considerably to the north of east, or at the line drawn at right angles to north and south. If he will continue to watch the sun's progress until noon, it will be seen to ascend in a curve southwards until it reaches the meridian; and thence to descend in a westerly curve until it arrives at the horizon and set considerable to the north of due west, as shown in the following diagram, fig. 19. An object which moves in an arc of a circle and returns to a given point in a given time, as the sun does to the meridian, must, of necessity, have completed a circular path in the twenty-four hours which constitute a Solar day.

Noonday Sun.

"To place the matter beyond doubt, the observations of Arctic navigators may be referred to. Capt. Parry and several of his officers, on ascending high land near the Arctic circle repeatedly saw, for twenty-four hours together, the sun describing a circle upon the southern horizon. Capt. Beechy writes:

"'Few of us have ever seen the sun at midnight, and this night happening to be particularly clear, his broad red disk, curiously distorted by refraction, and sweeping majestically along the *northern horizon,* was an object of imposing grandeur, which riveted to the deck some of our crew who would perhaps have beheld with indifference the less imposing effect of the icebergs. The rays were too oblique to illuminate more than the irregularities of the flows of the ice, and falling thus

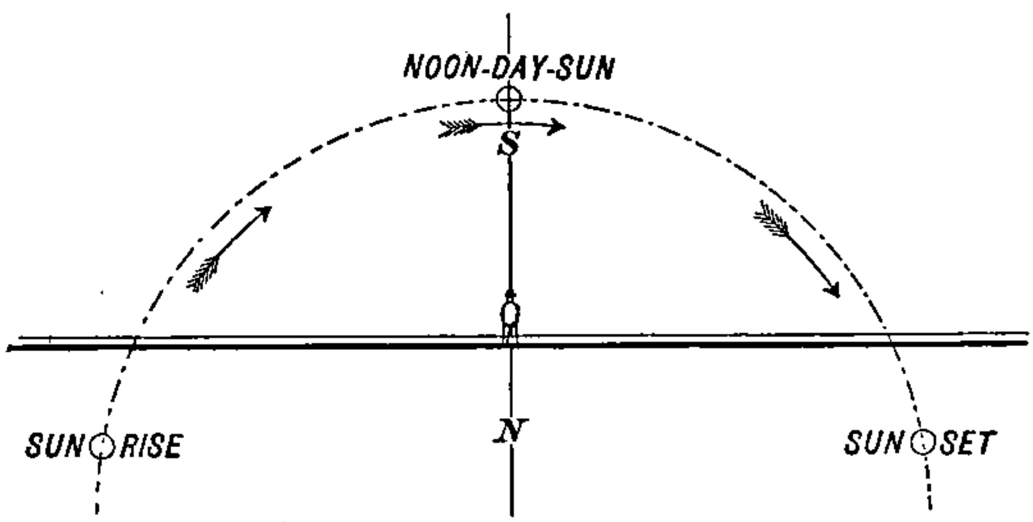


Fig. 19.

partially on the grotesque shapes, either really assumed by ice or distorted by the unequalled refraction of the atmosphere, so betrayed the imagination that it required no great exertion of fancy to trace in various directions architectural edifices, grottos and caves, here and there, glittering as if with precious metals.'

"In July, 1865, Mr. Campbell, United States Minister to

Norway, with a party of American gentlemen went far enough north to see the sun at midnight. It was 69 degrees north latitude, and they ascended a cliff 1000 feet above the Artic Sea. The scene is thus described:

" 'It was late, but still sunlight. The Artic Ocean stretched away in silent vastness at our feet; the sound of the waves scarcely reached our airy lookout. Away in the *north* the huge old sun swung low along the horizon like the slow beat of the tall clock in our grandfathers' parlor corner. We all stood silently looking at our watches; when both hands stood together at twelve, midnight, the full round orb hung triumphantly above the wave—a bridge of gold running due north spangled the waters between us and him. There he shone in silent majesty which knew no setting. We involuntarily took off our hats—no word was said. Combine the most brilliant sunrise you ever saw, and its beauties will pall before the gorgeous coloring which lit up the ocean, heaven and mountains. In half an hour the sun had swung up perceptibly on its beat, the colors had changed to those of morning. A fresh breeze had rippled over the florid sea; one songster after another piped out of the grove behind us—we had slid in to another day.' " Parallax's Earth not a Globe, pps. 105–107.

A Midnight Polar Sun.

Theories are of no certain character. He who builds his hopes upon a hypothesis, because of its pleasing nature and relative to his fairy dreams, as did the Copernican astronomers, is sure, sooner or later, to find his foundation is but sinking sand, and his hope that of the traveler's mirage in a desert land. Honesty of thought is to look truth squarely in the face, without fear of its contradicting itself, or destroying our preconceived opinions. Then, to think honestly, is to think freely,

and allow not the desire to run away with the thought, nor master that thought based on an axiom. He who does this, has predetermined what he shall believe. The amount of evidence, and weight of argument on such a mind, may be justly compared to water poured upon a duck's back.

Notwithstanding the existing fact, of the varied minds of men, we will proceed with our demonstrated method of proving our way as we go. First: It is a well-known fact by all northern navigators, that the sun can be seen at midnight, from the northern portion of Hudson's Bay, Behring Strait, and the southern portion of Greenland, and all of those points south of the Arctic circle. The latter is undeniable existing facts, regardless of the shape of the earth. Second: Another *undeniable* existing fact to thousands of people on land and sea, is this: The sun never reaches a latitude north of the Equator, exceeding 23° 30′. The Tropic of Cancer is well known to be the northern limit of the sun's vertical position, from the 21st to the 22d of June. Third: It is well known by all nautical almanac makers of our Goverment, and others, that *just* 45° from the *sun's daily path* he is seen at *noon*, at an altitude in the arc of the heavens of 45° (to the child we would say, explain *half-way* between the horizon and the zenith.)

This, then, will give a geometrical explanation for squaring our circle in order to get the relative position of the sun from the earth. And further, how the sun can be seen at angle of 45° altitude from either side of it at all times, wherever 45° distance places the beholder, is more than I am able to tell, and I have never been able to even find an intelligent person to attempt the task. This, however, will be more fully set forth in the next chapter.

In fig. 20 following let the dotted circle A A represent the sun's path around the earth horizontally, and concentric to the

north center N, 90, but never rising any above the 23½°—its position on the diagram, which is known to be the case by all people living on the Tropic of Cancer, it passing through India, Arabia, Egypt, Africa, Bahama Isles, Mexico and many islands of the Pacific Ocean and Chinese Empire.

Now, let us examine the corroborative testimony of Capt. Parry and his several officers as given under fig. 19, and especially the United States Minister to Norway, Mr. Campbell, who took their position 1000 feet above the Artic sea, in 69° north latitude, in the month of July, after the sun had commenced to recede from its extreme northern limit.

The following diagram, fig. 20, will more fully set forth the matter in its true light:

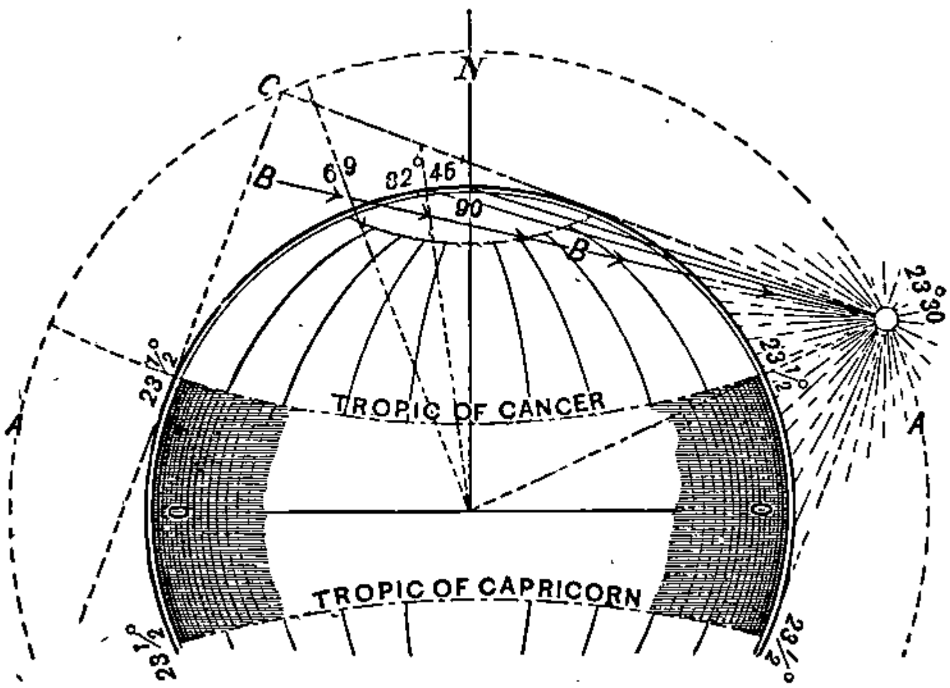


Fig. 20.

First, let us take our position on the "1000" feet elevation on the dotted line 69° arc and arrow line B B. We now find that we have a body of earth and water, over 1000 miles above the line of sight B B, and more than the radius or half the diameter of their supposed globe. But the nearest approach to

the center, ever made by man who returned to tell the tale, was Sir Edward Parry, who, with open boats, advanced in toward the North to the latitude of 82° 45′, or to the proximity of 435 miles from the North Center, commonly called the Pole. The dotted line at 82° 45′ is the relative position of Sir Edward Parry, and we find the line of sight would pass through a body of the earth equal to about 3,000 miles or more. But suppose that he were at the very center (and they claim it a great basin scooped out to a depth of some ten miles, but so much the worse for their theory—those who have the truth can afford to be liberal), he would have to reach an elevation on his *supposed Pole* of *more than ten miles* to the line of C in order to see the sun even on the horizon. Thus we see again and again the inevitable results of a hypothetical foundation.

CHAPTER XIV.

The Sun's Altitude. What is the Truth?

WE can reason intelligently only from what we know, and we are all dependent on universal history of all past time, for much of our present knowledge is procured from the experience of the ancients. When secular and profane history corroborates prophecy, both become to us facts. History tells us that the Ancient Greeks believed the sun to be about thirty miles distant above the earth. In the early days of Copernicus, who was born at Thorn, on the Vistula, February 19, 1473, it was believed to be about one thousand miles. During Copernicus' lifetime it advanced to three millions of miles. Sir Isaac Newton had it fifty-four millions. In 1754 it was taught to be between eighty-one and eighty-two millions. (A million or two did not make much difference, anyway.) To-day it is claimed, by some, to be ninety-one, and by others one hundred million miles distant from the earth, and its rays of light to extend two hundred millions of miles, and its light to travel that distance in one second of time!

To-day, the man that would presume to show a logical solution of these paganistical conglomerations of ideas, by a plain, geometrical process of logical reasoning, is pounced upon by news venders and editors, using all sorts of epithets to show his *would-be wise* indignation for the one who dare to attack, what the editor styles "a long-established, beyond the shadow of, doubt and impeachable facts," and warns his "unsuspecting readers against such nonsense, and whimsical attempts to mislead those not informed," etc.

We have no time to waste with those who find it more satisfactory to revile with sarcasm than to prove our position incorrect, but will invite all who feel so disposed to follow us through our two articles which bring to light the consistent or inconsistent teachings of the principles of modern science as compared with the most ancient in regard to the subject in question.

How shall we arrive at the truth concerning these statements and conflicting ideas? Ans. That which can be physically and mathematically demonstrated, or we will say in synonymous terms, that which can be *geometrically* and *mechanically* proven. The architect or the inventor having conceived in his mind a structure, is not positive of that structure meeting his mind in all points until he has obtained a draught on a proper and convenient scale, by which he measures all its parts and considers its relations, the one point with all others; and a little further, if you please, a model, a miniature, or a standard representation, is to him the *demonstrated truth* or a *type* of the *truth*. One more style of truth we would use in our argument, and that is axiomal, self-evident, and is just as infallibly *the truth* as it is, that the sun rose or set yesterday. We will ask the reader to be patient with us, and go slow, and we will try to use no more words than is necessary to make our argument conclusive, and safe to follow and understand, whether you believe or not. The evidence above mentioned we will now bring forward. First, we will present the former, the mechanical, and say to you behold a miniature drawing or diagram of the earth in figure 21. The first and inner circle is the representation of a globe. By squaring this globe at the four cardinal points, we produce an angle of 45° and establish a double quadrant at every corner. We also establish the latitude of 45° A A A A north and south, which are

co-equal in distance from the north, south and Equator B B B B. Right here let it be borne in mind that these lines and angles or degrees all bear the same relation to each other and relative proportions on this scale, as they would though the drawing were many times larger, or as large as the supposed globe itself.

And now for our universal, axiomal fact: Everybody knows (that knows what an almanac teaches) that the sun is vertical, plumb over the Equator, B B, on the 21st and 22nd days of September and March, respectively; one day on one side of the north center, and the next day on the other. The people living on the Equator certainly know the latter to be true. Now, whether the earth be a globe or a plane, one thing more we know: The people living at Ottawa, Canada, which is 45° north latitude, and the people in South America at 45° south latitude, see the sun at 12 o'clock noon, at one and the same time that it is vertical on the Equator. Where do they see it, and at what angle in the heavens? Answer: 45° altitude, which is, to be plain to all, half-way between the horizon and the zenith (plumb overhead.)

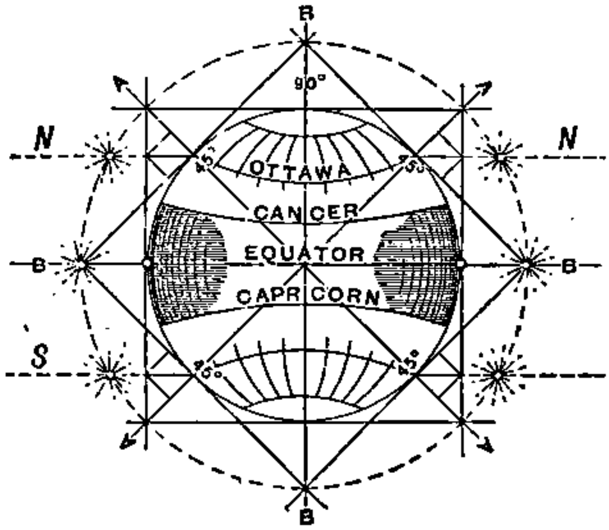


Fig. 21.

Now, in all fairness and honesty to all scientific intelligence and mechanical skill, we declare this drawing or diagram, to be according to the so-called science of the globular theory, and risk our small reputation before the world with the declaration. Now, if from B B B B is the base or horizontal lines from the four cardinal points or sides, then certainly A A A A, over the 45° is the vertical or plumb line, it is the zenith

to the locality of the "four forty-fives." From this construction it will readily be seen, by every person who has any mechanism in their head. If they will notice, the small angles of 45° at the "forty-fives" (call them quadrants if you please), simply produce co-equal parallel lines to each other, and dotted lines N B S. Let us follow this matter a little further—don't get tired *too* quick: While the people at the Equator B see the sun over their head at noon, where do the people at 45° north see the sun? Answer: On their own base or horizon line, just setting; that is, providing that each sees the same sun? Next, where do the people at 45° south see the sun? Answer: On their own base line, just rising! Again, as there are just twenty-four hours contained in a complete revolution of the sun, how many hours of sun would the people have while the sun would be going from A to A, or B to B? Answer: Six, no more, no less!

In view of this demonstrated fact, namely, that if the sun is seen at an angle of 45° north and 45° south at the same time vertical on the Equator, then there must be three suns. But it is said by some that the sun is much larger than the earth, and that the people on one side see one edge, and the people on the opposite see the other, etc. Yes! Let us see: Again, the globular scientists claim the sun to be 800,000 miles in diameter, and we must hold it at the angle of 45° from the two co-equal latitudes, for there is where they both see it, and there the visions or lines of sight cross, and there it is; *there is the center!* But hold! the lower limb of the sun is hanging just 400,000 miles below that center. It would wipe the earth out of existence in its first revolution. With these aforesaid lines running parallel and 3,000 miles apart, the sun only covering an angle of a little over half a degree or thirty-five miles, all told. You might look on the 45° N. latitude and 45° S. latitude, at an

angle of 45° for the sun to all eternity, it could not be sun while the sun was on the Equator. It is presumption in the extreme. We have placed the *sun* just where the squaring of the circle demands it must be, and still be at 45° altitude where it is known that it is. Now we know of no other principle that will carry out the problem and meet the conditions; and certain it is, that this does not meet the well-known requirements and facts in the case. It is also evident, inasmuch as we have seen by the above demonstration, that the sun could not be seen simultaneously at the three places by an observer on a globe, that *this Earth is not a Globe.*

The only conditions by which the sun can be seen from the localities named (or any other locality 45° from the actual locality of the sun's daily path), is given in an article written by the author of this book for the Buffalo *Times*, and published November 16, 1890, which we give in part below:

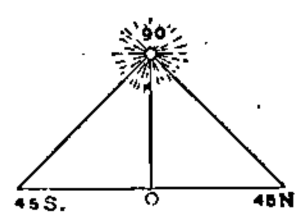


Fig. 22.

We present another diagram, fig. 22. This is simply two quadrants or right angles whose bases 45° S. and 45° N. are equal to the vertical or plumb line (o) which represents the Equator. The two hypotenuses (longest lines of the angles) whose bases respectively at 45° south latitude and 45° north latitude when raised at an elevation of 45° of the arc of the heavens, each determine the sun at that point 90°. We now have the matter in a nutshell. It is a nail in a sure place. It is too plain not to be understood, that all who know the diameter of the Equator (the sun's path or the diameter of the "supposed globe"), can know the distance from Ottawa, Canada, 45° north latitude to the Equator, and all do know that 45° latitude and 45° altitude, or in other words, the base and vertical are equal.

While we are aware of the many phenomena that are

supposed to be explained to be derogatory to the "Zetetic" or the earth a plane, we know of no principle or law, and believe that there is none known to man that will exclude or supersede the principle of the quadrant or right angle whose base and



Fig. 23.

vertical are equal. When we know the number of the degrees that we have gone on the base and have reached the apex by the line of sight; then if we know the measurement of these degrees, we know the whole story; the problem is virtually solved. The base and vertical of the quadrant are simply two *radii* of a circle, and we may as well declare that the two points of the compass will not determine the center and the circumference of a circle as to ignore this principle; this is the principle of measuring distances across rivers, without crossing or the altitude of any object unattainable otherwise; it is the process of measuring by "parallax." It is as infallible a principle as the finding of the two ends of a rod or beam in order to determine its length.

We have determined by these evidences given, that we have no use for the transit of Venus to prove the distance of the sun from the earth; its transit has no more to do with it than has a transit of the Belt Line passenger train going around the city of Buffalo.

The Sun's Distance.

(By Lewis Swift, Ph. D. D., Warner Observatory, Rochester, N. Y., U. S. A.)

The writer feels that he would be doing injustice to all parties concerned were he to ignore the most eminent writers and so-called scientists of the present day. To such as are unacquainted with Prof. Swift, I can do no better by them, in giving an introduction to the gentleman, than by giving a few quotations from his writings, and in due honor to the gentleman will say, that I believe it is universally understood that

Prof. Swift is one of the leading lights of the Newtonian system of astronomy, and as we shall see, an adherent to Kepler's Laws. We make no attack upon the gentleman, but it is the system that we propose to portray and compare parallel with that which we have endeavored to set forth. And we will further add .hat we believe the professor rightly represents the globular theory, and rotundity of the earth. We will commence on page three, second paragraph of the professor's "Simple Lessons in Astronomy" under the head of the "Solar System:"

"The Solar system is comprised of the sun and of all the bodies, by whatsoever name they may be called, which periodically revolve around him as a center.

"The known limit of the planetary system is the orbit of the planet Neptune, but it would not greatly surprise an astronomer at any time to hear that an extra Neptunian planet had been discovered. The extremes of the planetary system then (as recognized by astronomers), are Mercury, the nearest, and Neptune the most distant from the sun. This limitation does not include the hypothetical intra-Mercurial planet or planets discovered by Prof. Watson and myself during the total eclipse of the sun in 1878. The names of the planets in the order of distance from the sun are Mercury, Venus, Earth, Mars, the groups of the Asteroids, Jupiter, Saturn, Uranus and Neptune.

"Mercury and Venus have no satelites; the Earth and Neptune have one each; Mars has two; Jupiter and Uranus have four, while the ring planet Saturn, has eight.

"All the planets revolve around the sun, and as far as known rotate on their axes in the same direction — from west to east, as also do all the satelites, except those of Uranus and Neptune,

which revolve around their primaries from west to east, or opposite to the motions of the hands of a watch."

We have paused until the fourth paragraph has run its length, and here let us have a few words. We notice in the above paragraphs, first, that which comprises the Solar system is (in paragraph third, as stated) eight primary planets, having all told, twenty satelites; Uranus four, and Neptune one, making five, or one-fourth of the whole number, which revolve in a contrary direction from the hypothetically established laws of gravitation, and Kepler's *laws* or any *other man's laws* of centrifugal and centripetal forces. Including the primary planets, there would be twenty-three (besides the asteroids), five of which are running in contra-distinction, adverse to all known, or at least explainable, by inherent principles. This, it seems, should be sufficient to annihilate the whole Newtonian system. But it seems that there are always a large majority of that class of people who like to be duped, and prefer fairy tales to solid facts. But we will listen to a couple of paragraphs of the eloquent professor:

"Every member of the Solar system, be it planet, satelite, meteroid or comet, moves in an orbit called an ellipse. Though the orbits of the planets and their satelites differ in form but little from the circle, yet not one is known to actually describe that most beautiful of all curves. The ancients were loth to believe that God would cause or permit the planets to move in any other orbit but the perfect circle, but as soon as they broke away from that delusion and adopted the elliptical orbit, they found that computation and observation agreed at all times, while before, they agreed and disagreed periodically [and so they do yet]. For this the world is indebted to the genius of the *immortal Kepler*, who brought *harmony out of confusion* by the first of his three laws of planetary motion.

"*Motion* of every kind pre-supposes a moving power. This Solar system, whose center is the sun and whose circumference extends half way to the nearest star, is filled with worlds, every one of which is in *motion*. *Motion* seems here and everywhere to be almost an attribute of matter. There is not in the universe a *particle* of *matter*, be it a world or a molecule, which is at *rest*. And that the sun can hold at arm's length, as it were, *such huge globes as Jupiter, Saturn* and the other planetary and cometary bodies, and *swing* them *around their orbits* with such undeviating exactness that for *millions of ages* has not for a single instant relaxed its firm hold, is a striking example of the mighty influence which *attraction*, next to God, the presiding genius of the universe exerts on enormously distant worlds. [But where, oh tell us, where shall rest, *sweet rest*, be found?]

"For this," says the professor, "the world is indebted to the immortal Kepler who brought *harmony* out of *confusion* by the first of his three laws of planetary motion." But we will ask the professor to just state something of the characteristics of Mr. Kepler; what were his views? "The following are the views of Kepler, who, though one of the founders of modern astronomy, possesses in his character the strange admixture of exalted greatness and incomprehensible weakness, which latter evidenced itself in mystical speculations. It was he who taught that the planets were arranged in accordance with musical concords, Jupiter and Saturn taking the bass, Mars the tenor, Venus the treble, and Mercury the alto, from which has arisen the expression 'The music of the spheres.' He it was also who believed *the earth rested on a turtle*, whose breathings in and out of the waters caused the ebb and the flow of the tides." Mr. Swift, what do you consider the underlying principle of your *whole system*? "But though the

author of these and other astronomical absurdities, he made his name immortal by the discovery of the three laws of planetary motion, which *underlie all our later astronomical knowledge.*"

Such is the opinion of the renowned D. D. in regard to the value of the individual judgment on whom all seem to stand or fall, so far as the universally-accepted system of astronomy is concerned, and on that which his knowledge is founded.

In order to satisfy the public that we were not using simply our own individual ideas, of the sun's altitude and dinmesions, we wrote Prof. Swift on the 12th of September, 1889, and received the following statement:

"WARNER'S OBSERVATORY,
ROCHESTER, N. Y., U. S. A., Sept. 14, 1889.

DEAR SIR—The altitude of the sun's lower limb at noon at Buffalo on September 21st will be 47° 2′ 38″ and the upper limb 47° 34′ 36″.

Yours truly,
LEWIS SWIFT."

We suppose if we had asked the Rev. Dr. the diameter of the sun's disc in just so many words he would have kindly given it as he has taught others in his "Simple Lessons of Astronomy," namely, 886,000 miles. Now if we substract 2′ 38″ from 34′ 36″ we have 32′ 38″. This is, of course, on the Equator, and occupies a little over half a degree, which corresponds to about 35 miles for the sun's diameter. This latter statement by the professor is as all other scientific observers gives it; and we would like to see them harmonize the 35 miles with 886,000 or the 2,000 or less with 93,000,000, both of which the Rev. professsor freely gives, and at the altitude as given on the Equator, and the diameter as he has given it, its lower limb would wipe the earth out of existence at one revolution, and its upper limb would clean the firmament above.

Another infallible evidence that the earth is not a globe, is

this: The sun being determined at these angles they determine its distance; also the amount of the surface of a globe that it could *possibly cover* at one and the same moment of time, would be just six hours, or one-fourth of the earth's surface. Thus, we limit the twenty-four-hour day to six hours sun and eighteen hours darkness. There is no evading these conclusions.

If, from the day that we observe the sun at 45° north latitude, and at the angle of 45°, we travel south ten miles each day, for just ninety days we will find the sun at the angle of 45° each day. The sun has then reached the southern limit; we can then start back at the same rate, and for ninety days more keep it at the same angle; thus determining the fact that the sun ever remains the same distance above the earth. And as the sun travels in a spiral orbit from north to south, and *vice versa*, at the rate of 10 miles per 24 hours, and makes two and one-half consecutive revolutions at each solstice or termini, it never leaves that termini at the point where it entered it; consequently, does not run back exactly in the same track or cross the meridian lines in just the same place in the one journeying that it does in the other, thus accounting for the difference between sunrise and noon, and noon and sundown, which is known to exist; also, its journeying to and fro accounts for the change of the seasons.

On September 12, 1890, we addressed a second letter to Prof. Swift, asking for the altitude of the sun on the 21st and 22d of that month at Ottawa, Canada, and received the following reply:

"DEAR SIR—South of the Equator meridian altitude equals co-latitude to declination.

"North of Zenith to Pole meridian altitude equals latitude polar distance.

"Below the Pole it equals declination to co-latitude. Thus:

Pole	90
Latitude of Ottawa	45
Co-latitude of Ottawa	45
Declination of sun	00
Meridian altitude of sun	45 on September 22.

Yours truly,

LEWIS SWIFT."

Inasmuch as we prefixed our article at its head "Sun's Distance, by Prof. Lewis Swift," in justice to the gentleman, we will quote his own words from his own book "Simple Lessons in Astronomy," page 88:

"Now the diameter of the earth's orbit is 186,000,000 miles, and its radius is half of that amount or 93,000,000 miles, the earth's distance from the sun. We may ascertain its place by taking half its displacement as observed from the two extremes of the earth's orbit at an interval of six months, or 186,000 000 miles apart. This gives the radius of the circle or base line of a triangle. As, therefore, 93,000,000 miles are equal to a radius or 306,265, 1'' will equal 206,265 times 93-000,000=19,182,645,000,000 miles, a distance which an express train of forty miles hourly would require nearly 52,500,000 years to traverse. This explanation shows why, if the parallax of a star does not equal 1'' its distance is *at least* 206,265 times that of the sun, and probably much more, as we cannot be certain of the accuracy of any measurements below 1'' of arc, an exceedingly small quantity with which to deal, only 1-1,296,000 of the circumference of the sky!"

But what if in the supposed diameter of the earth's orbit of one hundred and eighty-six millions of miles (186,000,000) we find no parallax (displacement) as many of the Newtonian, Kepler and Copernican school affirm? What would the natu-

ral conclusions of a class, or company of professed scientists, who had established an observation of a known star or fixed point in the heavens, after a ride of 186,000,000 miles from their starting point, and then on the second observation find that they had made no progress?—the star no farther, no nearer! Could they not justly conclude that their once united brains, if any they had (?), had now become one united conglomerated "mux" (as Josh Billings calls it), caused by the whirling and spinning of that terrible machine and wonderful piece of mechanism, the globe, during that six months journey of 186,000,000 miles! But this we say (and we will give their own words), that not more than the 91-100 part of a second of arc was ever claimed by the most sanguine adherents, and this denied by the more considerate. We will give you just one quotation at this time. "The diameter of the earth's orbit is 200,000,000 miles [Prof. Swift says 186,000,000 miles! Well, fourteen million miles is not much difference, anyway]; yet we can detect no difference in their apparent places, viewed from the *opposite* points of this diameter; a change of place amounting to a second would be detected by the accuracy of modern observations." [Yes, surely, if there any existed and they should come as close as the above]. Encyclopædia Americana, article on Astronomy, p. 433.

In order to make Prof. Swift's letter of September 12, 1890 (which we gave a few pages back), plain to those unacquainted with astronomical terms, we herewith give a diagram that will more intelligently fix in the minds of those unacquainted with the absolute facts as they do exist. Without any reference to actual distance according to measurement, we give the relative position of FOUR established points, that are not dependent on the theory of man for their affixed position; they are as self-evident as that which the Creator

gave to rule the day, and bring to man the return and the change of our seasons, and until He who rules and reigns above shall otherwise decree, they will so remain. Before calling attention to the diagram, I will say that THREE of the above named points are so established and so ordained by the Creator, that they are accessible and of daily evidence to a great portion of the human family.

In fig. 24 we will commence our illustration:

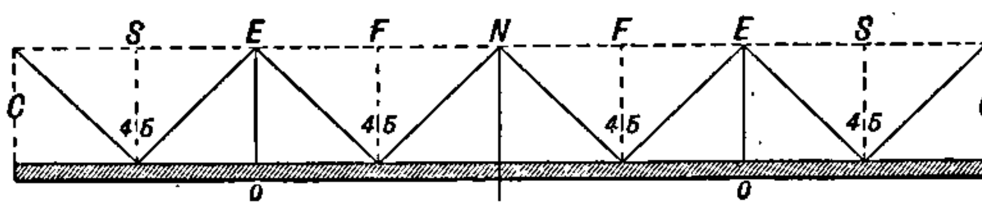


Fig. 24.

Let N represent the north center, commonly called Pole. This is north to every man on earth, no matter what his location may be. Let E E represent a cross section of the Equator through the North Pole N. Let the sun be on his circuit through the heavens, and his well-known position on the 21st and 22d days of March and September respectively, which is E E. We now have a "fixed" point; the Equator, No. 1. We next take F F, which is midway between E and N, on either side of N, and it is 45° N., being north of the Equator and co-equal in distance to the Equator on all sides of the north center, and this establishes the "fixed" point No. 2, the latter no informed person will question. Now, right here, bear one thing in mind worthy of ever retaining, for here is established points that will be brought into requisition further on, and ever after, namely: The people who live at 45° on both sides of the north center, and in fact all the way around the north center, and at all times of the year behold the north star at a *maximum* angle of 45° altitude.

We will mention the well inhabited countries through which this line 45° north passes, on which all people behold the North Star at a maximum altitude of 45° in the heavens, and the sun the same on the aforesaid days of the year—September 21st and 22d and March 21st and 22d. They are as follows: Turkestan, Turkey, Russian Empire, Romani, Austria, Italy, central portion of France, Southern Canada, northern part of the United States and the Chinese Empire.

Therefore, certain we are that we have one more nail in a sure place, and have established a fixed point—No. 3. And whilst we are here, before we leave this point, kind reader, let me suggest a thought: Suppose for a moment that N is the apex of an Egyptian pyramid, or a cone, whose angle of its sides in all places is just 45°; now place good marksmen all the way round the pyramid at its base, and let there be a small target close to the apex; at a given signal all are expected to fire at the target, and he who misses his mark, under equally favorable conditions, is not worthy the honor of a sharpshooter. Now, where would these men be most likely to aim? Would they expect to hit the mark, should they fire into the horizon or the zenith? Would they not aim along the line of the sides on an angle of the pyramid? We will let you consider this at your pleasure, but will say further, that in the diagram, fig. 24, 45° F F and 45° S S, all sustain the same relation to E E (the Equator) as the above illustration does to the North Center, and this establishes a "fixed" point—No. 4.

A few words in regard to 45° S S: Now, S S maintains the same relation to E E as does F F, heretofore described; but the relations that 45° S S sustains to C C, no human being can tell. The ice belt is found at between 54° and 56° south, 78° 10′ being the greatest extent ever reached by man. This was Sir James Ross, of whom we will speak in particular further

on. So far in this chapter we have only been able to give you the distance of the sun from the earth according to the Newtonian theory, together with Prof. Swift's figures and statements, which are acceptable generally with that system. As we have seen, if two astronomers of the Newtonian school come within fourteen million miles of each other as to the result of their estimations, it is very close. However, we trust that the reader who has followed us patiently, will have a good understanding of the "relative" position that we sustain to the sun and the North Center. We have not as yet given our figures for the altitude of the sun, nor the North Star, nor the diameter of the Equator; but having established our bearing at the Equator and North Pole, if we allow the North Center to be 90°, which is claimed, and we will so estimate for a while yet, surely 45 is half of 90. But in this we are estimating on the principle of the earth a globe, which we have found will not do; we have proved it a plane, and as it is a physical inconsistency and a literal impossibility to make the diameter equal to the circumference, so it is impossible to have the same number of degrees in the diameter or radius of a circle, and still have those degrees co-equal in length.

A Scale of the Solar System.

Below we give a true scale of the Solar System which will demonstrate the matter still farther. First, we affirm that there are but 57½ co-equal degrees in the radius of a circle. See fig. 25, the following scale of the Solar System.

As we have seen that there are but 57½° in the radius of a circle, we are now ready to commence to measure; and as the Equator (see fig. 25) is a fixed point we will commence there. We will take 15° on the Equator for our measuring rod—which is acknowledged to be 900 miles. (Sixty miles

per degree.) Now, as we have before seen, that from 45° N. our angles were co-equal to all points in question, we there place our 45° in name, but not in fact. Why? Because 28¾ degrees equal half the distance from the Equator to the

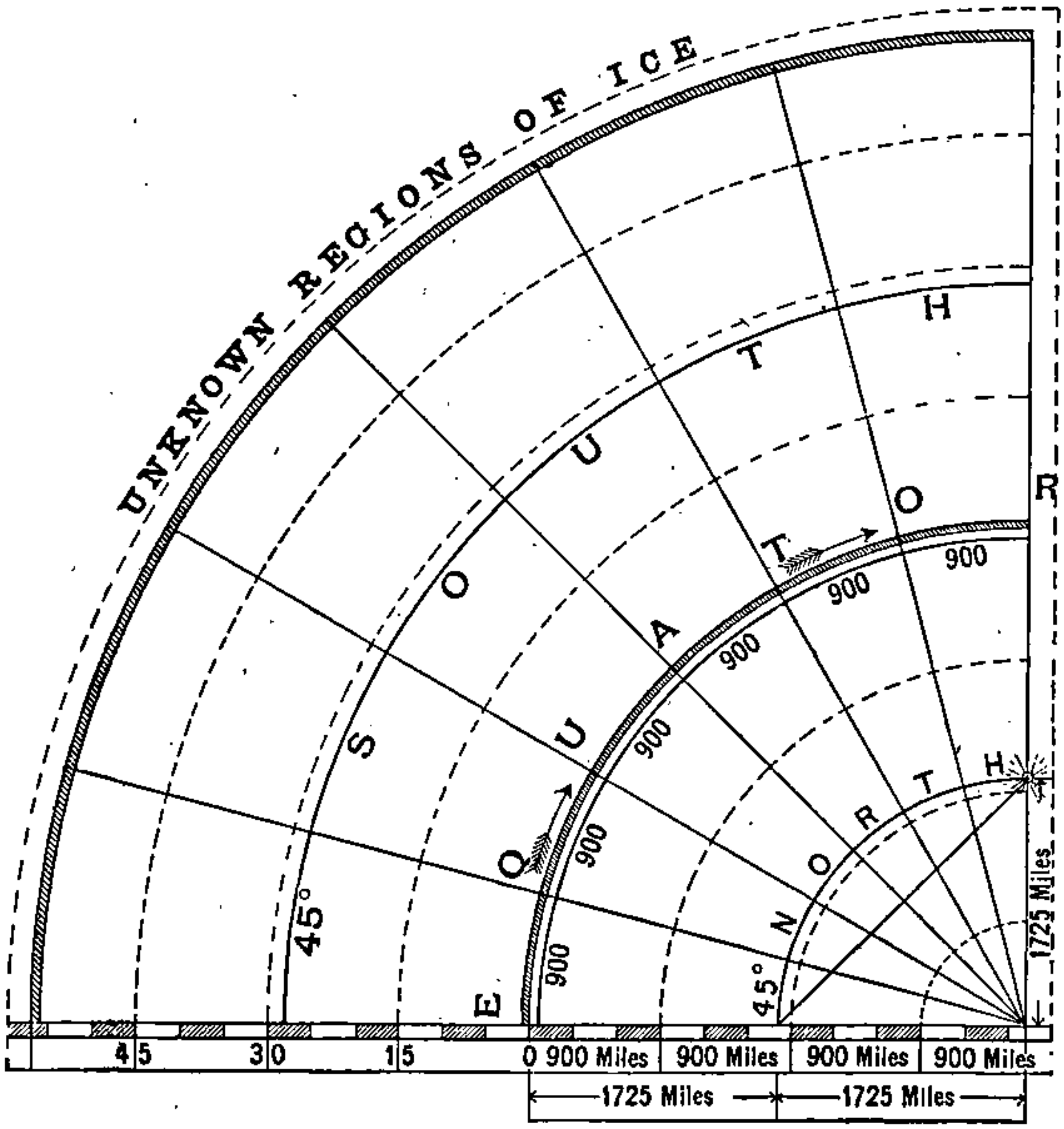


Fig. 25.

N. center and *vice versa*, and those 28¾ degrees equal 1725 nautical miles, to either the North Pole or the Equator, and the 1725 miles equal the altitude of both the *Sun* and the *North Star;* and *four* times 1725 miles equal 6900, the diameter of the Equator. The dotted circular lines and the one dotted

vertical are given to show where the meridian lines would come in case it should be claimed that the degrees of latitude are equal to the degrees of longitude, which, as we have proven, are not admissible.

In the above we have determined these distances by the most rigid geometrical process. We believe it as immovable as the Rock of Gibralter, and there remains one more point unexplained in regard to the right angle quadrant, which we give for the benefit of those who may require it. When the base and vertical, or as some may term it, when the two sides of a right angle are equal in length the hypotenuse sustains the same relation to the two equal sides, as 17° to 12°. This admits of no remaining decimals. For instance: the base being twelve inches the hypotenuse, intersecting the vertical, will be seventeen inches. The sides will admit of equal proportions at this ratio, and no variations.

Here are due many thanks to my conservative friends, who have kindly offered criticisms and cautious suggestions for which I am truly grateful, and hope ever for their continuation. Some of the Zetetic faith had given the sun's altitude 2500, some 3500, and some even less than I have given it. By what process they have arrived at the various results I do not know, but I know of no other geometrical process than the last herein given.

CHAPTER XV.

Extent and Form of the Sun's Rays.

WHILE we have been able to prove from many infallible sources that the earth is not a globe, we have not always been able to account for all phenomenon on the basis of either the earth a globe or a plane; therefore, we have had to let demonstrated facts rest, and wait patiently for further developments and additions, corroborating that which has been previously proven. One difficulty with the advocates of the earth a plane. has been to show night and day of equal length on the Equator when the sun *was on the Equator*; namely, on March 21–22 and September 21–22. It is well known by all who have noticed our almanacs that for the latitudes of 35°—45° N., they give as equal length of day and night; March 15–17 and in September as late as the 26th. We also think proper to here state, that while some have confidently affirmed that equal day and night was on the 21st and 22d of March and Septemder respectively, if they who live in the aforesaid latitudes will observe sunrise and sunset they will know for themselves, especially those who can observe it at sea.

We herewith give three cuts, figs. 26, 27 and 28, which are, approximately, our understanding of the form of the sun's rays in his variations from one solstice to the other in the change of his seasons. We wish these to stand as correctors and substitutions of diagrams on pages 90, 92, and map on the 97th page of our former book, the first edition of "Is the Bible from Heaven? Is the Earth a Globe?"

I will here give honor and credit to whom I believe it due

for the advanced thoughts that have caused this production, and I cannot see why it is not logical and in harmony with other *positive* evidences of the earth a stationary plane. Mr. R. E. L. Lovell, of Vadis, W. Va., a scholarly young man, first gave me the ideas and a sketch from which I have developed what you may here behold in a brief description:

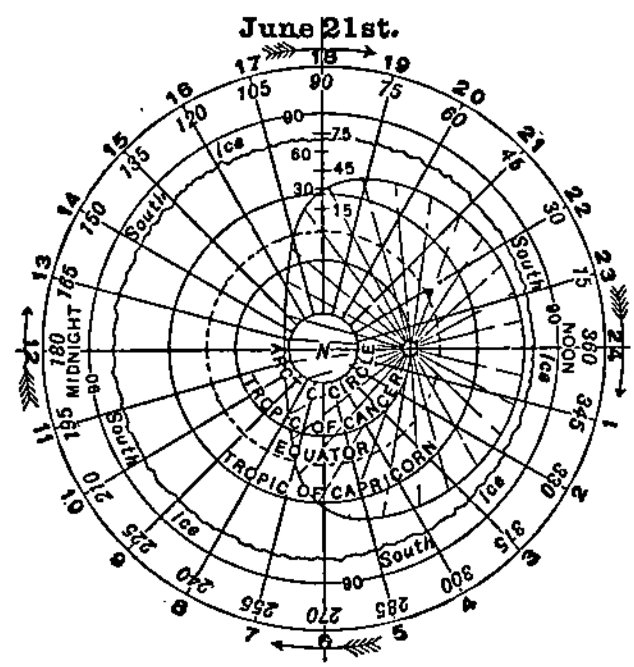


Fig. 26.

Fig. 26, or June 21st, shows the sun in his position on the northern or inner solstice, on the longest days we have north of the Equator, in which his rays extend to the greatest limit. It will be noticed that we have furnished each figure with the 360° and the twenty-four hours divided and marked on the outer circle. The second circle marked 90° and beyond the irregular line, marked south ice, no human being ever navigated; 78° 10′ is the greatest limit ever reached south of the Equator. Here are the everlasting bounds of perpetual ice. Fig. 27, or December 21st, is the sun's southern limit; his rays should extend, longitudinally, some farther over his daily path, in order to account for the longest days south of the Equator.

Yet, this is only an approximate construction, and it is well known and will be proven further on, that the days in the extreme south do not correspond to the day's length in the north. Were the earth a globe they should be co-equal. Fig. 28 or September and March 21st and 22d respectively, is the sun's

equatorial position, and on the Equator they have JUST TWELVE HOURS SUN, and of course twelve hours dark.

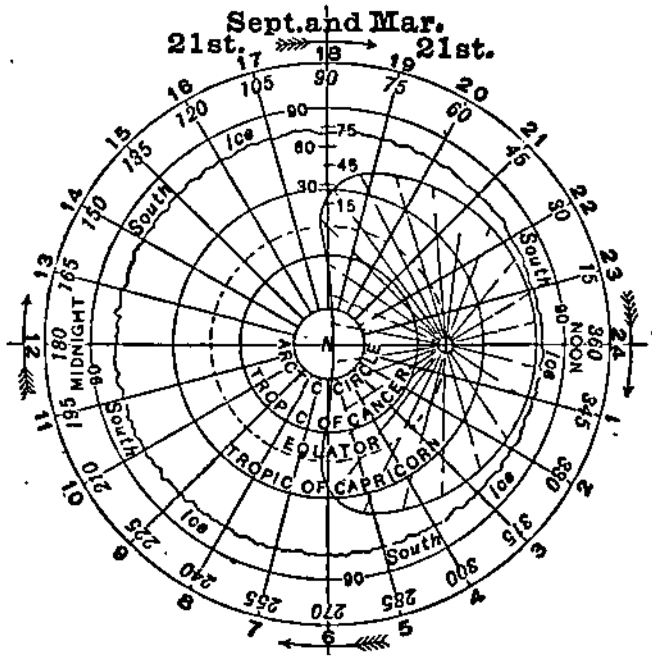


Fig. 28.

Were the sun so much larger than the earth, or should we behold the sun by refraction, in part, as is claimed by the globe advocates, then certainly there would be more than twelve hours sun on the Equator — the like of which was never known.

EXPLANATION: We often speak of the sun's being on the Equator on the 21st of March and the 21st of September; then again speak of its being the 22d. This may be a query to some that have not given the matter consideration, but it may be remembered that the 180th meridian is the line established by civil reckoning for the change of date in crossing the day line. Thus, east-bound a day is gained, west-bound a day is lost. In fact, no actual time is lost or gained; but as the sun makes his complete circuit to a given meridian every twenty-four hours, there must of necessity, in a commercial point of

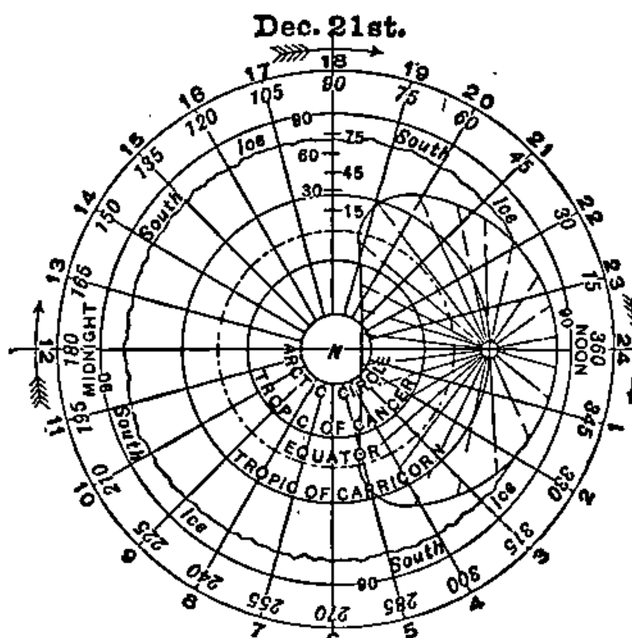


Fig. 27.

view between the nations, as well as a legal civil law, be an established Day Line. There must exist an acknowledged starting point, and the same must be the end. This part of the subject we hope to mention further on, but trust this will suffice for the apparent discrepancy in the above dates.

But to return to our subject—the heading of this chapter. We will give Mr. Lovell's own words and logical reasonings for the shape and extent of the sun's rays:

"I fell into the channel of thought from reading the following in G. P. Quackenbos' Natural Philosophy, a chapter on Optics, under 'Division of Bodies.' 'No substance transmits light without intercepting some by the way. It is computed that the sun's rays lose nearly one-fourth their brilliancy by passing through the earth's atmosphere, and that if this atmosphere (forty-five miles) extended fifteen times as far from the surface as it does, we should receive no light at all from the sun, but should be plunged into perpetual *night*.'

"Now, light penetrates the rare body further than the denser. It also passes through the more transparent more readily than through the less transparent. Storms refine and purify atmosphere; heat expands it, and cold condenses it. The southern atmosphere is more transparent than the northern. The Tropical or Equatorial is expanded and more rare than the Arctic. [The sun's rays ever extend farther east of his center or nucleus, directly under his path in the heavens, than any other direction.—Author.] With these facts in the mind of the reader, we think the diagrams will be understood."

The path over which the sun daily travels, and is rapidly moving, must of necessity be kept the hottest, and therefore the most expanded. The portion of the sun inside of the sun's path, that which is daily surrounded by the rays, or all north of the Equator, receives greater benefits from the light

than does that southern portion of earth and seas that are only passed by once in twenty-four hours; hence, the logical reason for more ice in the corresponding south latitudes than the north. And another phenomenon is apparently explained in the following: Of the twilight, morning and evening, in that latitude, I give the respective words of two reliable missionaries from Australia and Borneo. Rev. Father Johnson, a Catholic missionary says: "We have from *five* to *six* minutes twilight morning and evening; it does not exceed the latter." Elder S. N. Haskel, S. D. A., says: "At Melbourne we make preparations for the night while we can yet see the sun, because when it is sundown it is dark *immediately.*"

I suppose that the assertion "immediately" is in a relative sense, he having been accustomed to our long twilight of an hour or more. Now, it is evident that were the earth a revolving globe with the sun at its equatorial center, there would exist co-equal twilight.

Day's Length vs. North and South.

Inasmuch as it has been stated by our globe favorites that the same condition of things relative to the length of days, long continued absence of the sun, etc., existed, and that the flat-earth advocates failed to show by their demonstrations the actual condition of things as they are known to exist, we have decided to present a few well-founded and well-known authenticated facts to show their statements are without foundation:

At Stockholm, Sweden, latitude 59° 21′ North, there is 18½ hours sun.

At Hammerfest, Norway, latitude 70° 45′ North, there is continual sun from May 11 to July 22—three months. At Spitzbergen, 78° N. latitude, the longest continued day is *three and one-half months.*

The longest day we are able to find on record in the South (practically observed) is on pages 133-135 of "Antarctic Cruise," by Capt. Wilkes. He says: "On January 16 the sun set at a few minutes before ten.... The effect of sunrise at a little after two o'clock, on the 23d was glorious." This, though not definite, would give them a day something over nineteen hours' length in the latitude 66° south. But to contrast, we give *St. Petersburg, Russia,* latitude 59° 56' N., nineteen hours sun, the latter being about six degrees, or over 400 miles nearer the Equator; yet, about the same length of day, each of these ever having their summer or longest days. But lately I received an official statement from Prof. J. Morrison of the *Nautical Almanac Office, Bureau of Navigation, Navy Department, Washington, D. C.* In reply to my interrogations, he says:

"On December 21st and 22d at South Shetland, about 70° South (see any good map of the world), sun rises 2h. 3m. 30s.; sun sets 9h. 56m. 30s.; total 19h. 53m. *Longest continued day.* Reverse the results for June 22d and we shall have for June 21st and 22d sun rises 9h. 56m. 30s.; sun sets 2h. 3m. 30s.; total 7h. 53m. *Shortest continued day.* The above results are for the Sun's Upper Limb, or for the very first and last rays of sunlight; and are *absolutely correct.*" J. MORRISON.

From the above we have learned that at 78° north latitude (Spitzbergen) there is a summer in which the longest day is three and one-half months

We will turn our attention again to the Antarctic regions, and shall find that of all the navigators on record, Sir James Ross has penetrated the farthest south. He reached the highest austral latitude of 78° 10'. While we are noting an interesting expedition, or such portions of it as may be of interest to the reader, please bear in mind the fact that no record is made

of any LONG SUNNY DAYS during their SUMMER MONTHS, which are the most favorable seasons for south sea expeditions.

THE FRENCH ANTARCTIC EXPEDITION.

"In January, 1839, the French expedition under Dumont d'Urville, proceeded south from Tasmania and discovered two small islands on the Antarctic Circle named 'Terre Adelie' and 'Cote Clarie.' At the same time Commander Wilkes of the United States expedition made a cruise to the southward and mapped a large tract of land in the latitude of the Antarctic Circle, for which he claimed the discovery. But as a portion of it had already been seen by Balleny, and the rest has since been proven *not to exist*, the claim has not been admitted.

THE ENGLISH ANTARCTIC EXPEDITION

Was undertaken in 1839 to 1843, mainly with a view to magnetic observations and the determination of the position of the South Magnetic Pole. Two old bomb vessels, the Erebus and Terror, were fitted out under the command of Captain (afterwards Sir James) Ross, with Captain Crosier in the Terror. The cruise for the second season was commenced from Tasmania [south of Australia between 42 and 45° south latitude] in November 1840. The Aukland Islands and Campbell Islands were first visited and surveyed, and on New Year's day, 1841, the Antarctic Circle was crossed in about 172° E. A *few days afterwards* the two vessels were *beset in the pack* [ice] and began persevering and boring through it. By January 10th they succeeded, and were clear of ice in 70° 23′ S., and *next day* land was sighted, rising in lofty peaks and covered with perennial snow. That day Ross passed the highest latitude reached by Cook (in 1773, 71° 15′ S.). On a nearer approach to the land there was a clear view to the chain of mountains, with peaks rising to 10,000 feet, and glaciers filling the inter-

vening valleys and projecting into the sea. .... The land interposed an insuperable obstacle to any nearer approach to it. Captain Ross landed with great difficulty, owing to the strong tide and drifting ice, on a small island near the shore, named Possession Island, in 71° 56′ S. and 171° 7′ E.

"Inconceivable myriads of penguins covered the surface, but no vegitation was seen. Next morning there was a southerly gale which moderated, and on the 18th of January

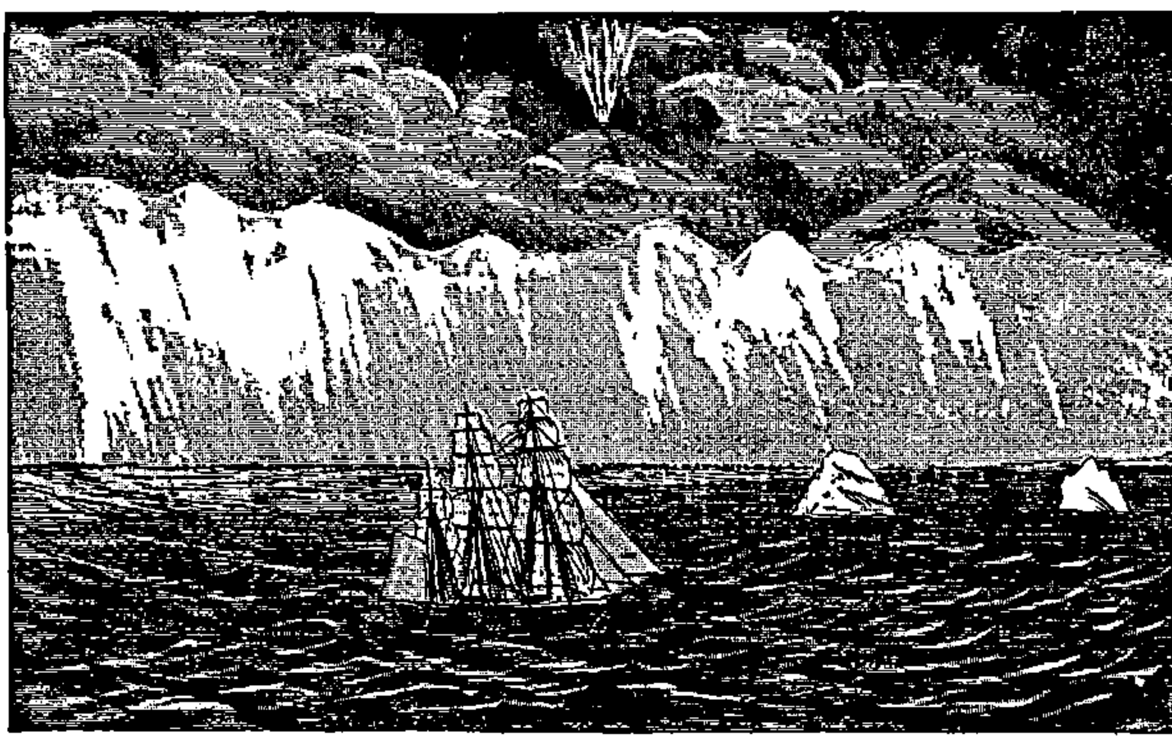


Fig. 29.

they were again sailing south in an unexplored sea. [No mention is anywhere made of extreme long days to correspond with co-equal latitudes of the north, as there necessarily should be were the earth a globe.] On the 23d they were in 74° 20′ S., and thus passed the most southern latitude (reached by Captain Weddell in 1823). Sailing along the newly-discovered coast Captain Ross landed after much difficulty on an island named after Sir John Franklin, in 76° 8′ S.

"On the 27th they came in sight of a mountain 12,400 feet above the level of the sea, which proved to be an active volcano, emitting flame and smoke in great profusion. It was named Mount Erebus, and an extinct volcano to the eastward, 10,900 feet high, was named Mount Terror. Along the coast as far as the eye could reach to the eastward, there was a perpendicular cliff of ice from 150 to 200 feet high, perfectly level at the top, and without any fissures or promontories on its seaward face. Nothing could be seen above it except the summits of a lofty range of mountains extending southward as far as 79° S. To this range the name of Parry was given. .... Captain Ross then sailed along the marvelous wall of ice eastward in 77° 47′ S. as far as 78° S. This barrier was estimated to be 1,000 feet thick, and it was followed for 450 miles without a break. ....

"The whole of the great southern land discovered by Sir James Ross was named Victoria Land. [Imagine if you can the amount of centripetal force there must be concentrated to the center of a globe or sphere, to hold these mighty walls of ice and mountains of frozen material in place. Is not the statements of the prophet Job easily reconciled with the above? 'Hast thou perceived the *breadth* of the *earth?* Declare if thou knowest it all.' (Job 38: 18). 'The waters are hid as with a stone and the face of the deep is frozen.' (30th verse Job, 26: 10.) 'He hath *compassed* the waters with bounds, until day and night come to an end.'—Author.]

"In November, 1841, the Erebus and Terror again shaped a southerly course, entered the pack ice on December 18th (summer), and once more crossed the Antarctic circle on New Year's day. The navigation through a belt of ice 800 miles broad was extremely perilous. At length, on the 1st of February, 1842, a clear sea was in sight, and they proceeded to

the southward in 174° 31′ W. On the 22d they were surrounded with lofty icebergs aground, and at midnight the great Ice Barrier was sighted and its examination recommenced in 77° 49′ S. *Next day* the expedition obtained a latitude of 78° 10′ S., by far the highest ever reached before or since. After escaping imminent dangers, in navigating through chains of huge icebergs, Capt. Ross took his ship northward and wintered at the Falkland Islands.

THIRD EXPEDITION.

"In December, 1842, the expedition sailed from Port Louis on the third visit to South Polar region, seeing the first iceberg in 61° S. On the 28th the ships sighted the land named after the Prince de Joinville by Dumont d′ Ursville, and the south side of the South Shetland's was surveyed. During February about 160 miles of the edge of the packs were examined. On March 11th the Antarctic circle was recrossed for the last time, and the expedition returned to England in September, 1843. Thus, after four years' most diligent work, the ably-conducted and quite-unparalled voyage to the South Polar regions came to an end.

"Two islands named Heard and McDonald, were also visited (on this wise), November 1853, by Capt. Heard, of the American ship Oriental. In February they were driven southward by a gale of wind, and the first iceberg was discovered on the 12th in 60° 52′ S. It was 200 feet high and about 700 feet long. On the 19th the ship was at a dense pack of ice in 65° 42′ S., and on the 4th of March they bore up to Australia. Several deep soundings were taken, the greatest depth being 1,975 fathoms [corresponding to about three miles].

"The route of the Challenger was much the same as that of the Pagoda in 1845, but more to the north. With it ends the somewhat meager record of voyages across and towards

the Antarctic circle." (C. R. M.) Encyclopædia Britannica, vol. XIX, p. 330.

Antarctic Exploration.

We understand by authentic statistics that the expedition of the Challenger and the reports of her cruise cost the nation the extravagant sum of over one million dollars. This, the necessary result of which that government regards with cautious proposal as to any further scientific advances for any similar expedition. And it, we believe, expressed its discouragement of the proposed Antarctic expedition in connection with the Australian Government. The Challenger did not openly admit that it had searched for the South Pole in vain. Oh, no; but it sailed three times around the world, or upwards of 60,000 miles without being able to say that it had been fortunate enough to ascertain the existence of any such wonderful locality. Of course, it may have gone on searching as long as its timbers or platings held together, and the same disappointment must have attended its efforts. Right here a thought or two may be suggestive to the reader: Were the earth a globe or spheroid, inside of the Anarctic Circle the degrees of longitude could not exceed thirty miles to the degree, but if we allow them thirty miles for adversities of winds, currents, ice, etc., and multiply 360° x 60 we have 21,600 in order to make a circuit of 10,800 (claimed by all globularists.) Yet, we can afford to be more liberal; we will call the multiplicator 120, and the product in miles will only reach 43,200; a little over two-thrids of their nautical record as above, and most of this inside the Antarctic Circle. But after a circuitous cruise like the above record, and a fruitless expenditure of over a million of dollars, it seems quite natural for them to feel somewhat crest-fallen, in regard to their previous importunateness with the government; although the record does

not state that they were in search of a south pole, but a "magnetic pole!" Yes, and where did they expect to find it, if they found any such thing? And what did they expect to call it when found?

A suggestion here will do no harm, if it does no good. We charge nothing for our advice when it is not followed. The aforesaid expedition could have made just as great a failure, with less money. Two or three hundred thousand dollars expended in sending one expedition south-west of Melbourne and a second south-east, they would end themselves at a distance of a thousand miles or so, the same as a rat in a barrel, and still find themselves as far from their "magnetic pole" as the north is from the south, the east from the west, or the Kingdom of Heaven is from the earth. But in the words of another, we would say: "To be looking for a south pole at the end of the nineteenth century just because some pagan astrologers concieved the idea of a planet earth, some two thousand years ago and men are yet found who pretend to accept this heathen blasphemy, is presumption in the extreme. The ice barriers which constitute the earth's circumference, extend for some 30,000 or 32,000 miles, but present no opening large enough for the passage of a seal or walrus. No alternation of long days, as in the Arctic region but the months of May, June and July are enshrouded in one long dreary night, the snow never thaws, and the crash of the falling icebergs appalls the stoutest hearts. Therefore, unless any expeditions to these regions is conducted with peculiar caution and intelligence, it would very shortly end in discomfiture and dismay to all concerned. And if anything is attempted beyond the inquiry whether there is any southeast or southwest passage, no possible result can follow than loss and discredit to the promoters and cruel suffering to the parties engaged."

CHAPTER XVI.

Eccentricity of The Sun's Path.

OF the size of the sun we have only a few words to say, as we noted the matter in chapter 14. There is, however, nothing simpler and easier than the practice of plane triangulation, and nothing known to the surveyor more definite in procuring the altitude of any object inaccessible by any cause, such as across rivers, gulfs, the height of towers, steeples, etc. Prof. Lewis Swift kindly gave the triangulation of the upper and lower limb (edge), which virtually and emphatically gave the diameter, and that not exceeding twenty-five nautical miles. The earth, as we have previously proven, is absolutely without motion, either in axial or orbital direction. Both science and Scripture, as well as common sense, assert the positive fact of the diurnal revolution of the sun, as well as the rest of the planetary system only, with which the earth has no possible analogy, neither is the latter identified with the former only as a receiver of their benefits for which the Creator designed. The sun's speed, in the spring or autumn equinox, is, of necessity, just fifteen nautical miles per minute or 900 miles per hour—that being the distance between meridian lines of longitude on the Equator; in its lesser orbit, in the June solstice, 15° from the Equator. (We say 15 degrees from the Equator because we have proven in chapter 14, fig. 25 that that is correct.) North, its speed is proportionately reduced to 665 miles an hour, and increased to the same extent in its December or winter solstice, to 1,135 miles per hour. The following diagram will more forcibly bring before the reader

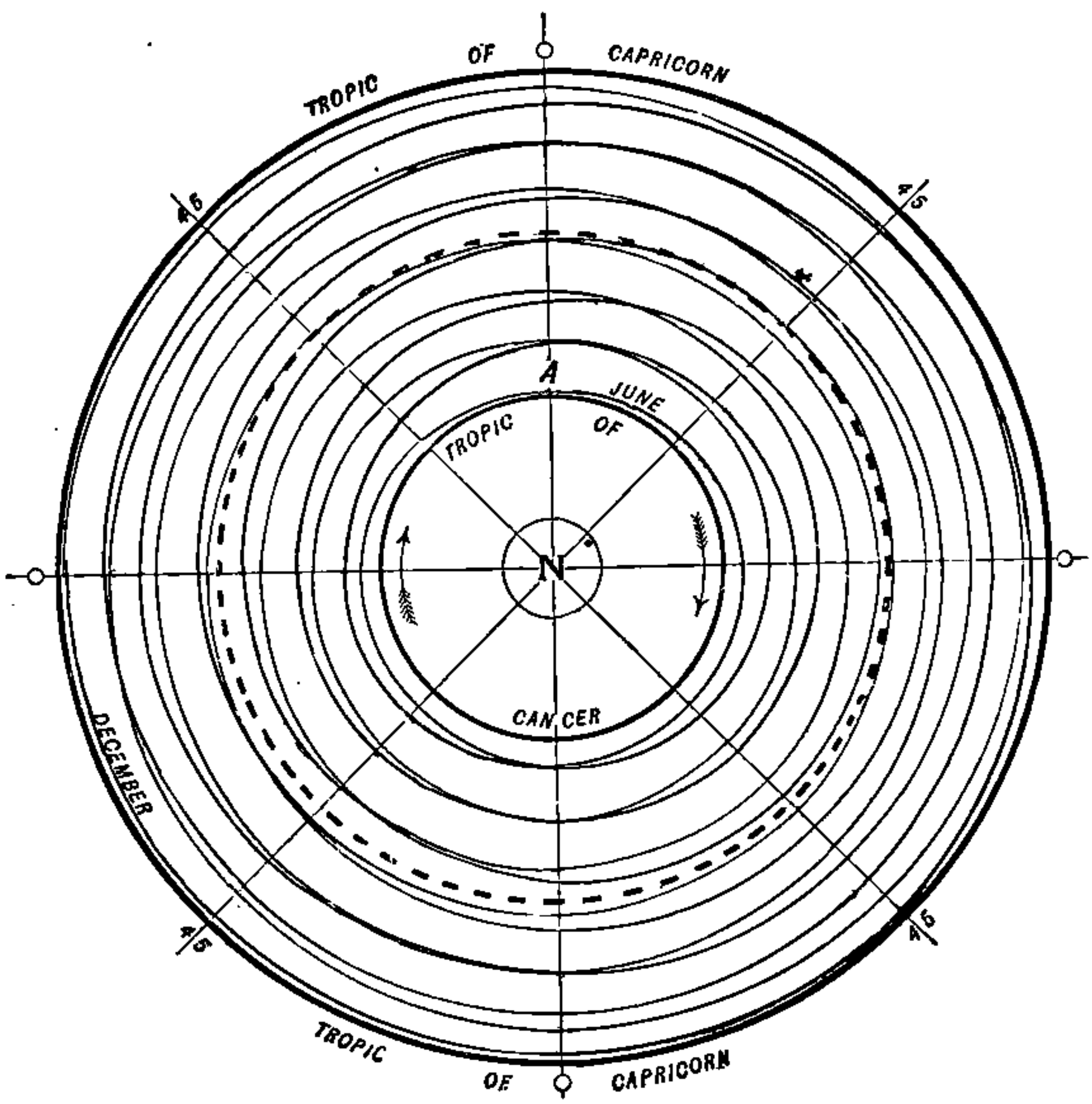

TROPIC
OF
CAPRICORN
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TROPIC
OF
N
CAN CER
DECEMBER
4/5
4/5
TROPIC
OF
CAPRICORN

Fig. 30.

that peculiar course of our luminary, than we otherwise could. It is the demonstrated facts as to the sun's various positions at the Equator, his two tropics and intervening localities, as well as his altitude, that has called forth the facts set forth in the following. As to the exactness of the design or construction of the diagram, we make no claims; yet, we are confident that it properly illustrates the sun's spiral course between the two solstices.

In fig. 30 let N represent the north center, let the red line represent the June solstice, and the sun at "June" on the line 45; now trace with a pointer the red line until you run into the outer black line, and make one complete revolution and come round the second time; then take the first inner black line, at the junction where it commences to diverge from the outer line; keep your pointer ever on the paper, until you again reach the inner solstice "June." Thus you can continue to wind back and forth, or out and in, ever running in the direction of the arrows—the sun's course on his *never-ending journey* from west to east. For the Creator has declared, that while the sun and the moon shall endure before Him, the seed and name of the righteous shall endure. See Ps. 72:5, 7; Isa. 31:35–36.

It may be noticed that there is six black spiral circles and six red; these correspond to the twelve months, and in the sun's course bring the change of seasons. There is a few more interesting points that we will notice in regard to the long continued time regulator that courses his journey through the heavens.

Once in 651 years only it is that he crosses every line in his race, and appears on the very minute and second of time, and the minute and second of arc; also, the same day of the month and the same day of the week. It is only at the expira-

tion of that period and that number of journeys through the heavens, that he lands on the same identical spot or starts on his journey back from the same. Truly, "The heavens declare the glory of God; and the firmament showeth His handiwork. .... In them [the heavens] hath He set a tabernacle for the sun, which is as a bridegroom coming out of his chamber, and rejoiceth as a strong man to *run* his *race*. His going forth is from the *end* of the heaven, and his *circuit* unto the ends of it." .... Ps. 19: 1-6.

Another worthy point to notice is this—that as the sun travels in his numerical precision of solar time, just 900 miles in one hour on the Equator from east to west, so does it travel just 900 miles in ninety days in his spiral course northwards or southwards; there being ninety days from equinox to solstice, the distance is just about 900 miles. Thus it is with all of the Creator's works; they will bear magnifying a thousand times, and yet there will ever be something for His wise creatures to learn.

The Solar System.

In Lockyer's Astronomy, page 78, is an illustration of the Solar system, giving the sun's disk with Jupiter, Saturn, Uranus, Neptune, Mercury, Venus, Earth, Mars and the thirteen Asteroids, arranged in two lines in their relative order, and each representing its relative size according to the globular theory. The cut fig. 31, will illustrate the diagram. We have only given one-half of the disk as he has it in his book, yet we have given all the planets, etc., their full size as claimed and set forth by him, and the diameter of the sun's disk, all these bearing their relative proportion to the sun. Now, if we put all these so-called mighty bodies in a line and close together, and measure Saturn across his rings, they would only reach a little more than half way across the sun's disk.

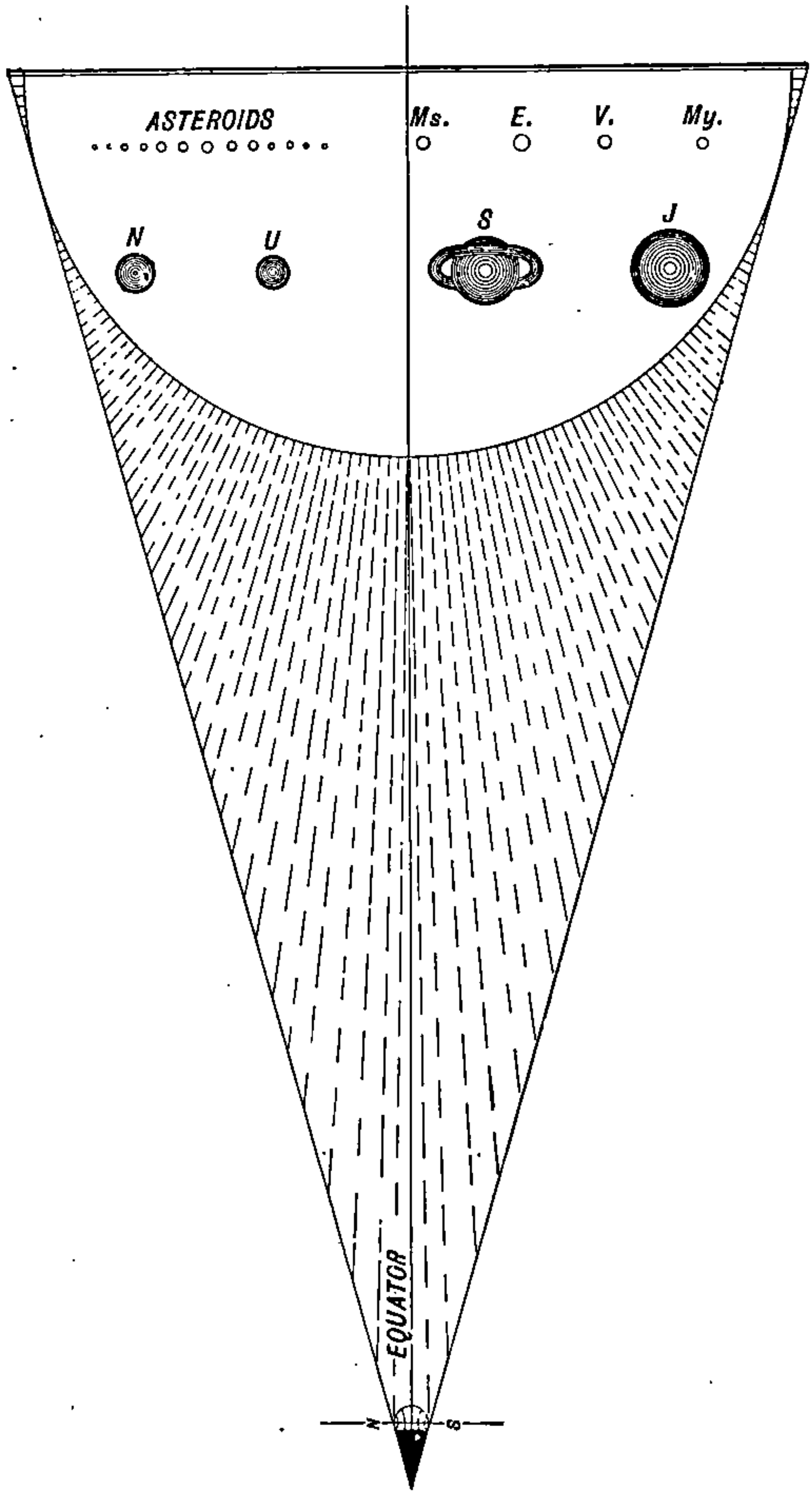


Fig. 31.

We have enlarged the earth to twice its proportions and placed it more than four times the distance that the actual triangulations require. Now, we have placed the sun on the Equator, and when in this position it is well known to all people, that on the Equator they have just twelve hours sun, and twelve hours absence of sun, there never being over six minutes twilight. But it will be seen that in this case about two-thirds of the earth is constantly lit up; therefore, as sixteen is two-thirds of twenty-four, there should be sixteen hours continuous sun on the Equator on the 21st and 22d days of March and September, respectively. This is only one of the thousands of like inconsistencies of building a system, and acknowledging it established; teaching it to our children in our schools; becoming elated, and like a soap bubble inflated, until collapsed, and find at last we had only a *mythological hypothesis,* whose weight and value is as incomprehensible as the cubic contents of the sun, of which Prof. Swift's "Simple Lesson's in Astronomy," page 9, says: "338,700,000,000,000,000, or three hundred and thirty-eight thousand, seven hundred billions cubic miles. In order to count the same a man would require two thousand million years!" And worse than all, the professor has Doctor of Divinity attached to his name, and on the last page of his book says that all this is, "The utterances of calm and *actual truth.*"

The North Star, or Polaris.

This is not in the true north, but a radius of 1° 22′ 24″ is the circumscribe from the acknowledged true north. The magnetic current which governs the surveyor's compass needle is very fluctuating, sometimes one side and sometimes the other from the true north, and this variation is known to all surveyors; but in early days, when the telescope was not

brought into requisition and points established by observations of the heavenly bodies, very bad or to say the least, great variations occurred in the running of our town lines, etc.

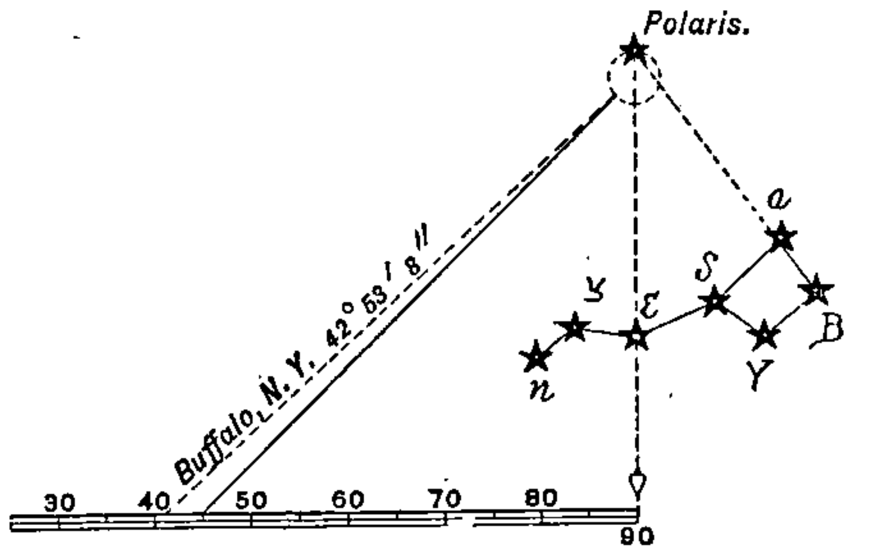


Fig. 32.

The position of Polaris is generally traced by the direction of the stars A and B, or Alpha and Beta, in the Great Bear. (See fig. 32.) Polaris passes the meridian on its true north when the star E in the Great Bear is perpendicular, either over or under Polaris. In low latitudes Polaris is near the horizon, and the Star E cannot be seen when under, but must be observed at its upper transit. When the star E is horizontal with Polaris, subtract the radius of the circle, and the remainder will be the true north, from which the variation of the compass is ascertained.

The maximum angle of the north star from the tower of the City Hall in Buffalo, N. Y., is, as shown in fig. 32, 42° 53' 8", and at the City of Ottawa, in Canada, through which the latitudinal line of 45° north runs, the angle is 45° arc. As we have noticed this in diagram fig. 24, chapter 14, the reader will only have to turn back to that in order to compare facts with the wild and fanciful theories and inconsistencies of which we herein give a few from the other side of the house:

"The nearest known star has a parallax of 0° 85", equal to a distance of twenty-two and one-half billions miles, and its light requires three and three-fourths years to reach the earth, though moving 185,500 miles per second. .... Whenever we gaze at the North Star, the universal lighthouse of the sky, let us remember that its beautiful light which guides the navigator, left its fiery home forty-eight long years before..... All the first magnitude stars is equal to 4,484,000 times the earth's distance from the sun." Simple Lesson, p. 88.

Now, in order to arrive at the distance of Polaris (allowing that to be of the first magnitude), is to multiply 93,000,000 (the sun's distance) by 4,484,000, which equals 417,012,000,-000,000 miles distance from the sun. Yet, the facts are as before given, the North Star subtends the same angle as does the sun when on the Equator to all people at 45° north all around the world. (See fig. 24.) Prof. Swift says:

"The four stars forming the bowl of the great dipper, Alpha, Beta, Gamma and Delta are on the body of the animal, while the three, Epsilon, Zeta and Etna, which, at the invention of the constellations, may perhaps have occupied some other place in the anatomy of the bear, and rendered the constellation more suggestive of its name than is its present configuration indicative of the animal's long tail, while in truth, the bear is almost destitute of a caudal appendage. This abnormal representation led an old-time pupil to make inquiry why Ursa Major has so long a tail, to which the ancient teacher made reply as follows: 'Jupiter, fearing to come too nigh unto her teeth, laid hold of her and thereby drew her up unto the heaven, so that she of herself being very weighty, and the distance very great, there was great likelihood that her tail must stretch,' and finished by adding: 'Other reasons none I know.'

"If then, the startling fact is conceded that all the stars are in motion, it follows that the time must come, in the far distant future, when every feature of the sidereal heavens as now viewed will be swept away forever. The time is slowly but surely coming, when there will be no dipper in Ursa Major, no chain in Casiopia, no sickle in Leo, no belt in Orion, no southern cross, and during all the eternal ages of the future they will never re-appear."

In reply to the above statements of Prof. Swift, we can only quote a few passages of that Word which he has heretofore claimed that he had a calling to teach. "Thus, saith the Lord, which giveth the sun for a light by day, and the ordinances of the moon and the stars for a light by night. .... The Lord of hosts is His name. If those depart from before me, saith the Lord, then the seed of Israel also shall cease to be a nation before me forever." (Jer. 31:35, 37.) "But the saints of the most High shall take the Kingdom, and possesses the Kingdom forever, even forever and ever." (Dan. 7:18.) Thus, we leave Prof. Swift in contra-distinction with the Word of the Creator.

CHAPTER XVII.

Circumnavigation.

IN fig. 33, following, there remains a fair illustration of the circumnavigation of a globe. The captain of a vessel at 45° north on the 21st of March, wishing to take his vessel south, and knowing that the sun is vertical on the Equator, and wishing his exact bearing, prepares to take observation; at twelve o'clock midday where must he look? Now, all navigators will tell you that his sun will be seen at 45° arc or altitude in the direction of D. Now, if we put the sun five times as far away as what plain geometry demands, he is no better off in getting approximately what he knows he must have, if he knows anything. He well knows his sun must be on the angle C in the direction of D, but lo! his sun is at E, and is setting at noonday, for it is on his horizon line. Again, we suppose him sailing on a level sea and at 45° north (see fig. 34), half way between the Equator and north center, and his observation is all right, his angle is 45° arc — no trouble here. Now it may be claimed, by the inexperienced, that as before stated, I have deceived by placing the sun too near the earth. Well, if any man can place the sun, or North star, or any other object in any other place, on a globe, and yet have an angle of 45° arc from 45° latitude, I would give something for the information of how to perform the act.

Some who hold the earth to be a globe affirm that they *know* the earth to be a globe, "because they have sailed around it, and nothing but a globe can be circumnavigated." But we will give another verbal illustration: We take a square block or surface, place a powerful magnet in the center; then take a

stick a few inches long and let this represent a vessel; anywhere on the stick or vessel set a pivot, and on this pivot set a magnetic needle; having done this, travel around this center

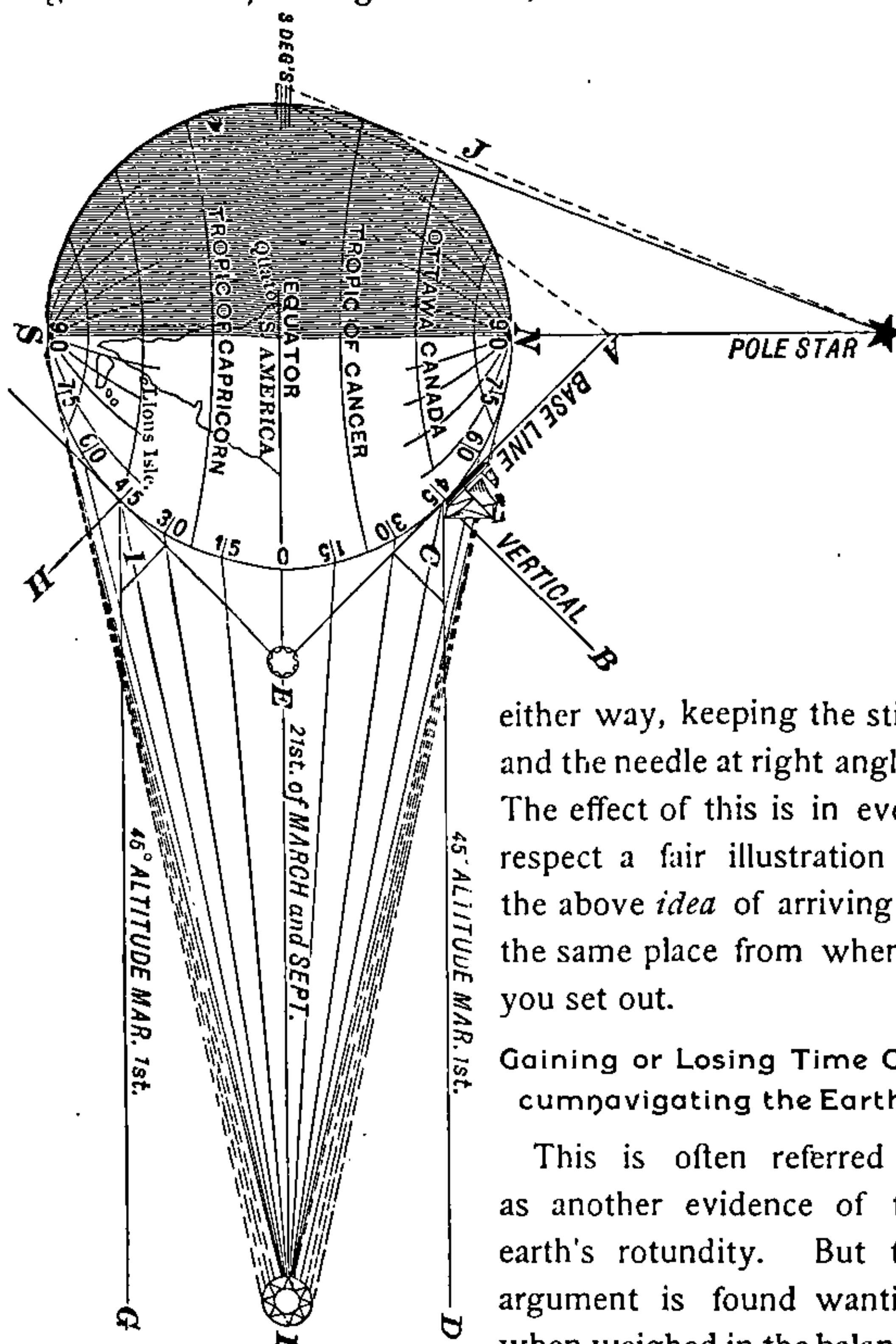


Fig. 33.

either way, keeping the stick and the needle at right angles. The effect of this is in every respect a fair illustration of the above *idea* of arriving at the same place from whence you set out.

Gaining or Losing Time Circumnavigating the Earth.

This is often referred to as another evidence of the earth's rotundity. But the argument is found wanting when weighed in the balance. By fig. 35 we will illustrate

this matter. As the sun makes its journey to and from the same place every twenty-four hours, we will start at the arrow 24; let the arrow 24 represent a locomotive traveling fifteen degrees every twenty-four hours, while of course the sun

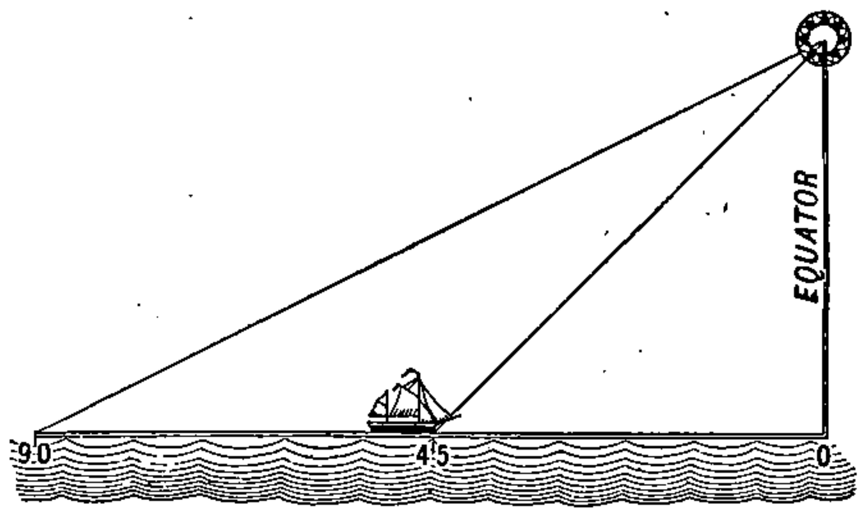


Fig. 34.

travels 360 degrees in the same time (15°x24=360°). At precisely twelve o'clock noon the sun's center o is on the line at 24 and the arrow or locomotive has reached or traveled fifteen degrees to fig. 1. Five days more pass, the arrow is at fig. 6

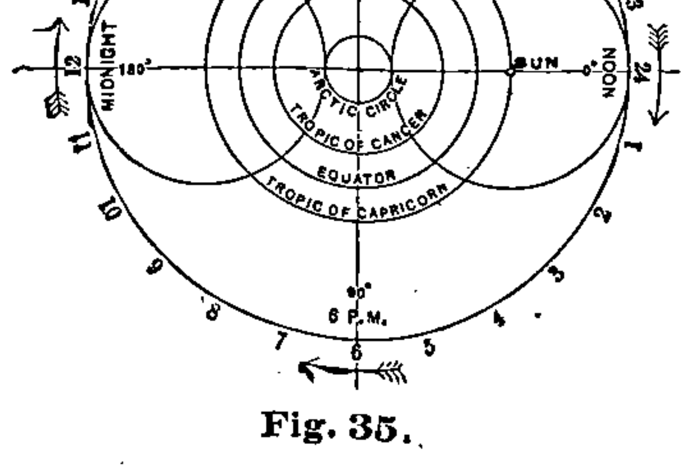


Fig. 35.

at the same moment that the sun is at 24 NOON (0). Another six days pass and at MIDNIGHT the locomotive is at 12; the sun at 24 (0). Now as we pass this line 12 with the locomotive we drop out a day in order to have the reckoning correspond with *sun time*, because as we pass the line 12 we have accomplished over half a revolution of the sun, or in other words, while we have been traveling in company with him, we have enjoyed twelve hours more of his light than we would had we stood still. And had we been traveling the other way at the same speed we should have gained the same amount of darkness that we gained light going the other way. Again, it is light that *chases darkness* around the world, and happy is he who walks in the light.

Declination of the Polar Stars and Other Objects.

Another phenomena supposed to prove rotundity is thought to be the fact that the North Star sinks to the horizon as the traveler approaches the Equator or passes, when it becomes invisible. This is a conclusion premature and illogical. Were this the fact it is only the ordinary law of perspective for an object to appear lower and lower as it recedes. Stand by the telegraph pole, close by—you have to elevate your head to see the top; at half a mile it appears on a level with your vision, although it be somewhat up-grade. "If we look in the *Times* of May 13, 1862, in the Naval and Military Intelligence, we may read as follows: 'On April 19th, in latitude 23° 53', longitude 35° 46', Captain Wilkins reports that the Southern Cross and Polar Star were both distinctly visible at midnight.' In the event of this being an error of some kind, we may state that we have heard from the lips of Captain Edward Gillit that he has observed the same thing between the 12th and 13th degrees of south latitude." Carpenter's "Common Sense Astronomy," p. 47.

Inasmuch as the foregoing paragraph has been denied by some, and the affirmation made like the following—"It is claimed by navigators that the North star is observable only when three degrees north of the Equator"—we prefer always, inasmuch as it is possible, to let our opponents fix their own terms; by so doing a reasonable man is better satisfied of his inconsistency, when he condemns himself by his own logic.

By referring to fig. 33 it will be seen that we have placed the Pole Star about four times as far from the globe as the actual triangulation requires. From the dark side of the globe and on the Equator we have marked off three degrees (3°), according to the claim of our opponents; from the third degree, counting north from the Equator, we have run a dotted line to A, which is the proper place for the Pole Star, as it is co-equal in altitude and distance with the sun when the latter is on the Equator. In doing this we have run under a body of earth or seas 666 miles in depth and about 3,500 miles long. But with the truth we can be liberal; therefore, we have placed the star at four times the required relative distance from the earth, and there is about 300 miles of earth above the line, which passes through 1,500 miles of earth. Again, we arise from the earth to a distance of six degrees of the circle to the dotted line, J. Now, six times sixty (for they are miles) equal 360 miles high above the earth, in order to see the North Star if the earth were a globe!

Refraction of the Atmosphere.

Inasmuch as there exists in the minds of some a great amount of incredulity, lest we have not made due allowance for refraction, it may not be out of place to say a few words, also to give, so far as known, the existing laws which govern conditions and existing contingencies by which it is possible to make any allowance. We will first give the views of a

scientific source, and their tables for the same, that every man can choose for himself.

The "Encyclopædia Brittanica," article on "Levelling," says: "We suppose the visual ray to be a straight line, whereas, on account of the unequal densities of the air at different distances from the earth, the rays of light are incurvated by refraction. The effect of this is to lessen the difference between the true and apparent levels, but in such an extremely variable and uncertain manner that if any constant affixed allowance is made for it in formula or tables it will often lead to a greater error than what it was intended to obviate. For, though the refraction may at a mean compensate for about one-seventh of the curvature of the earth, it sometimes exceeds one-fifth and at other times does not amount to one-fifteenth. We have, therefore, made no allowance for refraction in formula."

By the above we see that the "Brittanica" did not consider it necessary to make allowance for refraction; yet, whilst some others who may be considered authority have done so, we will give such as we have, but will say that refraction can only exist when the visual line of sight passes from one medium into or through another of different density, and it is usually (or perhaps I may say always, for such has been my experience), when the beholder is standing in a more rarefied atmosphere than that into or through which he is beholding. Such are the conditions of a mirage or refraction, though the mirage of an object is usually inverted.

The amount of refraction allowed by ordinance surveyors is one-twelfth of the altitude of the object observed at the horizon. Now, it is a well-known fact that our horizon distance —while there are various tables giving such—is not always the same to the same eye, inasmuch as the conditions of the atmosphere govern, to a more or less extent.

In March, 1888, the writer visited a point of land known as Sturgeon Point. Its promontory extends into Lake Erie, and is eighteen miles, direct line across the bay, from the City of Buffalo, N.Y. The sun was shining bright, the ice which lay in the bay and harbor was fast thawing, and a perceptive vaporish atmosphere arising between the point where I was located and the city. Over the city rested a heavy cloud of smoke, mingled with the steam of many passing locomotives, which are in constant transit around the city. With our telescope we could locate many of the prominent buildings, such as the transportation warehouses, elevators, etc.; but with the unaided eye, we could at intervals, when the steam of passing trains lightened the smoke over the city, behold all that portion of the city lying along the harbor inverted in the atmosphere. Sometimes the inverted mirage would rest on the roofs and pinacles, or the tops of their substances, and then again they would rise as the smoke and steam would rise from the city. As the wind would gently move the aqueous substance, so would the panoramic scenery change.

DISTANCE, MILES.	CURVATURE IN FEET.	CURVT. AND REFRACT'N.
1	0.666	0.575
2	2.666	2.283
3	6.000	5.141
4	10.675	9.150
5	16.675	14.291
6	24.083	20.583
7	32.683	28.167
8	42.691	36.591
9	54.025	46.031
10	66.700	57.175
11	80.708	69.175
12	96.050	82.325
13	112.716	96.616
14	130.732	112.058
15	150.075	126.633
16	170.750	147.191
17	192.766	165.225
18	216.108	185.233
19	240.783	206 391
20	266.800	228.683

The most beautiful of all this scenery was this: At about two miles or more north of the described view and the city proper, stands the International Bridge, between the Canadian and American shores, across the Niagara River. While this lay behind a point of land on the Canada side and our position, we could distinctly observe the mirage of the bridge, with its beams, piers, braces, etc., and an inverted train

of cars in transit—all suspended in the atmosphere above.

On the preceding page we present a table showing difference of apparent and true level, or the supposed curvature of the earth with and without refraction; further illustration is given in diagram, fig. 36.

Navigation. Distance and Dip of Horizon.

FROM DIFFERENT HEIGHTS ABOVE THE SURFACE OF THE OCEAN.

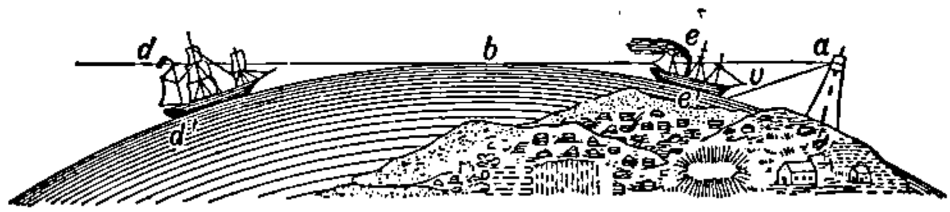


Fig. 36.

For similar heights see Curvature of the Earth.

The refraction is included in the dip of horizon, the distance being the tangent *a b* in statute miles, at the elevation of *a*, in feet.

EXAMPLE 1. The lighthouse at *a* is 100 feet above the level of the sea. Required the distance *a b*. Height, 160 feet=13.23 miles.

EXAMPLE 2. The flag of a ship is seen from *a* in *d*. Required the distance *a d*, when the flag is known to be fifty feet above the level *d'* of the sea?

Height of the light 100 feet=	13.23 miles *a b*.
Height of the flag 50 feet=	9.35 miles *b d*
Distance to the ship.......	22 58 miles *a d*.

EXAMPLE 3. A steamer is seen *e*; the horizon *b* seen in the masts is assumed to be sixteen feet above the level *e'*. Required the distance to the ship?

Height of the light 100 feet=	13.23 miles *a b*.
The assumed height 16 feet=	5.29 miles *e b*.
Distance to ship..........	7.94 miles *a e*.

The last table for curvature and refraction, together with distance and dip of horizon, and the examples 1, 2 and 3 are fac-similes of what may be found in an English standard work, twelfth edition, by John W. Nystrom, Philadelphia, entitled, "Mechanics and Engineering."

On the above we have a few remarks.

First: We have published the table of curvature for the benefit of those who believe that there is an existing curvature or convexity to water, or in other words, that this earth is a globe 25,000 miles in circumference.

Second: We have published the same for the benefit of those who know better as well as for those who wish to investigate; and

Third: We wish all to know the fraud that is practiced upon the credulity of the unsuspecting community and the rising generation in the public schools. Such illustrations and fradulent misrepresentations have become by far too prevalent in our public schools.

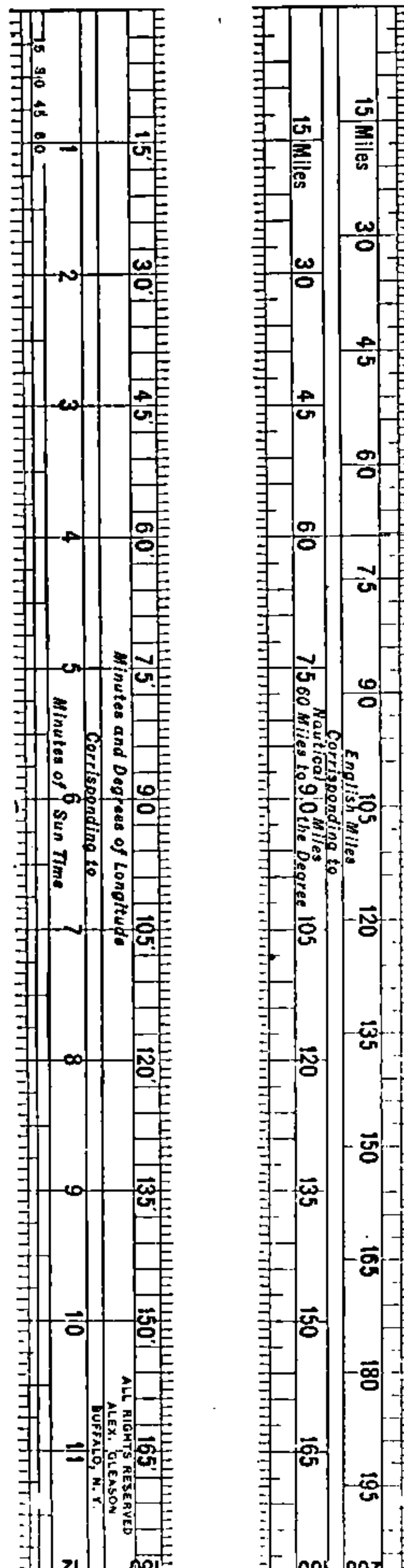
First, we notice by placing a protractor on the illustration, that the entire length of the scale is 65° of the arc of a complete circle. Now, 65° at sixty miles each = 3,6co miles. From the water to top of lighthouse is 5°=300 miles high. From the water to the top-mast of the most distant ship 300 miles! From the lighthouse to the farther ship is 37° which equals 2,220 miles, on the globe hypothesis, or any other theory or fact, where proportion is used. In conclusion, we only have to say, that the only thing in the diagram or scale that even approximates to the truth, is the "examples"; and they are based on a hypothesis, which is only a supposition and can be of no practical value whatever further than the exercise of mathematics.

For the benefit of schools, etc., we give English miles corresponding with nautical and geographical miles. Fig. 37 gives the relative difference between English and nautical, or geographical miles. The first line of divisions, in fig. 37, it will be seen runs from 1 to 208 miles. Of these there are 69 and 16-100 to each degree of longitude (on the Equator), as represented on the lower edge of fig. 37. It will be further noticed that 208 English miles are equal to 180 nautical, sea, or geographical miles.

In figure 38 we have first, as will be seen by laying a straight-edge across the two scales, figs. 37 and 38, on the lower edge of fig. 38, 15, 30, 45 and 60 seconds, or one minute sun time, 15′ Solar, which equals 15 nautical miles or 17¾ English miles. Thus, both Sun and Solar measurements of time and distance can be computed to any extent by the simplest rules of arithmetic.

Comparison of Longitude and Time.

Since the sun makes his revolution through the heavens and above the earth in twenty-



Figs. 37 and 38.

four hours, from east to west, or through 360° of longitude, it follows that in one hour he passes one-twenty-fourth of 360°, or 15°; in one minute of time through one-sixtieth of 15°, or 15′ arc, and in one second of time through one-sixtieth of 15′ arc, which is equal to 15″ arc.

COMPARISON, FOR A DIFFERENCE OF.

15°	in longitude,	1 h.	in time......	900 longitude miles.		
15′ arc "	"	1 m.	"	 15	"	"
15″ " "	"	1 s.	"	1-60 of 15	"	"
1° "	"	4 m.	"	or 60′	"	"
1′ arc "	"	4 s.	"	1-360° or one mile.		
1″ " "	"	1-15 s.	"	1-3600° of " "		

The English land or statute mile is 5280 feet. The nautical, sea, or Solar mile is 6075 feet.

A New Circular Map of the World, and Longitude and Time Calculator.

We have prepared A NEW MAP OF THE WORLD AS IT IS. The map is finely executed and printed in six colors. It contains all the continents and principal islands and rivers of the world, also, all the principal cities of the earth. The circle of the map is fourteen and one-fourth inches, having a time dial on which is marked in bold Roman numerals the twenty-four hours of the day and the minutes of the hour. The face of the map is provided with two detatched radiating arms from the center to the circumference of the time dial, the arms are held together by friction, having a pivot socket at the center of the map. On the arms is stamped the degrees of latitude; by the operation or moving of these arms the relative time of day or night is quickly determined and read on the dial by the child or person who can read the multiplication table, or tell the time of day by the hands of a clock. Latitude and longitude, and the existing difference of time between any places may be determined *without the aid of figures* in a moment's time after the places have been located on the map.

The great advantages to the child or pupil are these: The whole world is before the person, with all its continents, countries, etc., in their detail and relative location, the one to the other; and so is the geography of the earth and seas established in the mind.

The map should hang in the house of every family in the land as well as every office or public place. The Publishing Company have ready a large wall map for school rooms and public places. The company will not only supply the United States, but the world, and very soon the Globe map and Mercator's projection will not be found. As a useful commodity they will not exist, and if any existence of them should be preserved, it would be but a memorial of that pagan idolatry from which the nations had evolved.

The hypothesis of the motions of the earth and planets around the sun were not original with even Copernicus, as has been claimed or supposed by some. According to mythological tradition, Pythagoras, the sun worshiper, was the medium through which the devil operated, to bring into requisition the present godless adorations of the inventions of man—godless, I say, for such ideas as the founders of the system possessed and taught, I am safe in saying, never sprang from a Divine source. It is but simply a matter of justice that I mention the source of this pagan institution.

In the opinion of Pythagoras, God is the universal spirit, diffused in all directions from the center, the source of all animal life, the actual inward cause of all motion. To the Divinity there were subordinate three kinds of intelligences, gods, demons and heroes—emanations of the supreme, varying in perfection and dignity, in proportion as they were more or less removed from their source. The heroes he believed to be

clothed with a body of subtle matter. Besides these three kinds, there was a fourth—the human mind.

The regions of the air, the Pythagoreans thought, were filled with spirits, demons and heroes, who were the cause of sickness or health to men or animals, and by means of dreams and other kinds of divinations, imparted the knowledge of future events. Of man they believed that since he consisted of an elementary nature, a divine or rational principle, he was a microcosm; that his soul was a self-moving principle and consisted of two parts—the rational, which was a portion of the universal soul, an emanation of the central fire, and had its seat in the brain; the irrational comprising the passions, which had its seat in the heart; that in both, man had something in common with the brutes.

Pythagoras taught that he who devotes himself to this study is a philosopher. For this purpose it is necessary to invoke in prayer the assistance of the Divinity and good demons. For the facts see "Pythagoras" in any encyclopædia.

CHAPTER XVIII.

Perspective Laws and Vanishing Points.

IT is a well-known and universally-accepted theory, with astronomers and scientists, that any round body, whether celestial or terrestrial, vanishes or disappears visually at a distance from the beholder of 3000 times its diameter.

In this case, as in every other, we will only use their own words and illustrations in order to "vanish" their paganistical and idolatrous theory.

Truths, though a thousand, hold good together;
Falsehoods, no matter how many, no, never.

First, we give the statement of Dr. A. Wilford Hall. In his journal the *Arena*, of September, 1887, he says: "Any round body, whatever its size, will be reduced to its perspective point in receding 3000 times its own diameter from us."

In order to speak from demonstrated knowledge in the matter, we made three small targets as follows: One, one-half inch, and pinned it on a board of dark background; secondly, two more of the same size as the first. These last two we placed their edges together as shown in fig. 39. Tacking these up some three feet from the first, we prepared the third complete circle, one inch in diameter, and fastened the latter about the same distance from the second as was the previous two apart. Now, as 3000 half inches equal 125 feet, we measured the distance with a ten-foot pole, and found that with some difficulty we could just discern the first

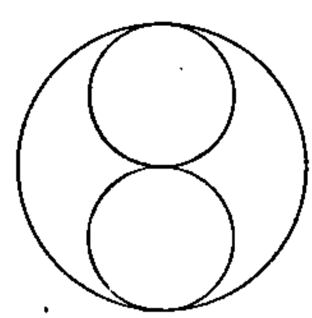


Fig. 39.

target. The second target, of two half-inch circles together, were easily distinguished at about 260 feet, while the inch circle was discernible about 800 feet. So we see that it is the increase of area that has more to do with the vanishing distance than has the increase of diameter in a round substance, as we have shown. The half-inch circle contains .1963 area, while the inch contains .7854 area, nearly four times as much area as the half-inch, and seen nearly four times as far. Theory is good—yes, excellent, when founded on correct principles; otherwise it is equal to feeding the horse sawdust for meal. But we will look into this law of perspective a little farther.

In both Lockyer's and R. A. Proctor's "Elements of Astronomy" is a representation of Jupiter and his four moons, sizes, distances, etc., and Mr. Proctor says they have been seen without the aid of a telescope. The following, fig. 40, is an illustration of the same.

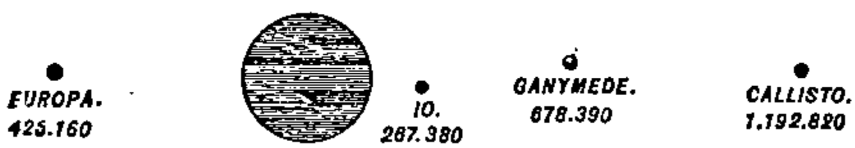


Fig. 40.

Inasmuch as these men are representative men, and publishers of standard works, not a few for our schools, etc., the bare-faced imposition upon the unsuspecting pupils is too manifest and too tempting to the investigator to let pass. Were these statements and pretentious measurements made by a novice we could let them pass. The error demands exposure, though the men are dead and gone. If we turn to page 296 in "Lockyer's Elements of Astronomy," appendix table of distance from the earth, etc., we will find marked "Jupiter's least distance from earth, 408,709,000 miles from the earth." Now, the diameter is given at about 85,000

miles; 3000 times this equals 255,000,000 miles as the vanishing point of Jupiter. This, then, requires, according to these men's own words and figures, that Jupiter be placed 153,709,000 miles further than they claim it to be. So we see again that two errors, though confirmed by two great authors and believed by all the world, do not make one truth, nor come within a million miles of an approximatio to the truth.

As the distance of Jupiter's satelites from their primary are given in fig. 40, their diameters are given as follows:

o, 2252 miles; Europa, 2,099 miles; Ganymede, 3,436 miles; Callisto, 3,057. We will give another sample: Take Callisto's diameter, 3057 x 3000=9,171,000 miles; add this latter to Jupiter's least distance from the earth, which Mr. Lockyer gives as being 408,709,000 miles, and we have the little satelite removed from the earth, four hundred and seventeen million, eight hundred and eighty thousand miles from the earth (417,880,000), and yet Mr. R. A. Proctor says they (Jupiter's moons) have been seen without the aid of the telescope. I can say that I have seen all of Jupiter's satelites with a small field glass of not more than six or eight powers, and I can further say that plain triangulation proves all of those theories, in regard to distance and dimensions, millions of miles in excess of facts. But, say some, should we not be charitable to our opponents and believe that it is the area of the body instead of the diameter that demands 3000 times its surface for its vanishing distance? Yes, I think so; this is what our first and only experiment proved to be, approximately, the truth, but most bodies contain more area than diameter; therefore, it would not help their side of the question. The sun's disk, for instance, with all his system is on less than one-half its area.

I know oi no round body whose diameter is greater tnan

its circumference, unless it be that animal's body anciently spoken of, which it was said "was possible to go through the eye of a needle." There is known to exist the diameter of a circle whose circumference is equal and no more than equal to itself. Four inches in *round numbers* is the maximum; it stands in the desimals thus: Four-inch circumference, 12-566, four inch area, 12-5664. Below four inches, circumference exceeds area; above four inches, area exceeds circumference. Thus, for instance, three inches diameter contains 9-4248 in circumference, while the same contains 7-0686 area. The other side of four to five the circumference is 15-708, the area of the same is 19-6350, but no maximum is known for the coequal of diameter and area.

Transits and Eclipses vs. Orbit of the Earth.

As we have desired to notice the oft-repeated assertions in regard to the shadows of the earth on the moon (the earth between the sun and the moon is the equivalent), we will try and make the matter plain in this article.

Mr. R. E. L. Lovell, of Vadis, W. Va., kindly sent us an article which he wrote for a Tennessee paper, *The Busy South*. Such portions as bear on the subject and are not a repetition of what I have written, I gladly publish and illustrate by a diagram further on in the subject.

First: "Just now, the papers are giving lengthy articles from astronomers, whose fertile imaginations are constantly evolving some new theoretical speculation. They are now talking of men and their doings, who, they claim, inhabit the planet Mars—that red star, so discernible at times, in the sky. Early in August of this year it was given out by American astronomers that they had discovered on the southwestern limb of Mars, three bright lights, forming a triangle, which would

flash up brilliantly for a time, and then suddenly disappear. In the official report from the Lick Observatory, Monday night, August the 8th, it was stated: 'Last night on the south polar cap very complex and numerous dark markings were visible. The unique spectacle of markings in the snow caps has been noted not only with the large telescope, but with the twelve inch by Barnard, who some time ago observed that on one night a dark streak would appear across the polar cap, and then would follow a separation, and then the disappearance of a large portion of the polar cap, leaving two white spots.' The great Milan astronomer, Prof. Schiaparelli, has also discovered numerous and extensive canals cut in Mars, he claims. The *New York World* of August the 10th, whose correspondent had interviewed the professor, says: 'Schiaparelli was the first person to give definite basis upon which to rest the belief that Mars was inhabitable by a highly civilized race. He discovered that the surface of the planet was intersected by a large number of canals. It was apparent from the map he drew, that these streaks were real canals because they were perfectly straight; were obviously artificial because they did not recur on any of the other stars. It took all of Schiaparellis' keen eyesight to detect their two parallel banks.'

"What a pity! Now, if the professor had only used a portion of his eyesight to discover the people who cut those ditches, he would have had a stronger story. We read further in the paper mentioned, that the astronomers not only believe that the lights, lines, etc., are an arrangement to signal us on the earth, and that they are also trying to think of some means to answer them, but that 'apparently these black streaks which move so mysteriously, yet with a seeming method, over the frozen polar plainly concentrate at the pole itself. This would be natural under the circumstances, as if great ropes or blankets

of some dark substance had been tied or anchored at the poles, and were being swung from their lower ends.' How very ingenious! Ropes, blankets, flash-lights, canals and their banks, clearly outlined!

"Astronomers who talk of seeing those things as though but a few paces off, would certainly be in possession of 'keen eyesight,' when we know that they place the distance of Mars from the earth at 35,000,000 miles! But what about the people they might have seen, also? Well, when it comes to such speculations as they indulge in, they need not despair about the people, for they can be exactly located in some way. Let us see — we once heard a gentleman say that at regular intervals of a certain number of years, that where there are mines or large deposits of precious metal, such as silver ore, it would throw off a gas, which, coming in contact with phosphere becomes ignited, giving a very brilliant light. Then, since astronomers have declared that they have found iron, sodium, salt, etc., in the sun, why not Mars be a vast ball — say of gold; this would help them to account for its bright appearance, different from any other star. The burning of the gas will prove the metal, and account for the jack-o-lantern lights they have seen. The ditches they have mistaken for canals show where the people have been getting out — or rather, taking in, the precious metal; for, since the men are not seen on the outside, it is evident that they live on the inside. As authority also for this, we have but to call up the great novelist, Lord Bulwer-Lytton, who has predicted a mighty people in the bowels of the earth, in his book called 'The Coming Race.'

"So, having them once located there, the moving of the southern cap, which from its color was thought to be snow, is only a trap door made of refined metal. The spots which

its moving exposes, are the furnaces and fires of the refiners. Now the idea would be, not to make known to them that they have been discovered, but to make a rush upon them and capture their treasure. Jules Verne, the famous Frenchman, who is the author of 'A Trip to the Moon,' can readily concoct a scheme for the astronomers to get there and bring the gold away.

"So much for speculative astronomy. And 'tis just as rational as the Newtonian theory of Creation, which says that the universe was once filled with flying particles, which gradually collected into atoms of matter, and these, through countless ages of time formed themselves into nebulous masses; which, after other ages, and as it were, by self-obtained rotation, became fiery suns; that many of these suns, after other countless ages, passed into what they term the planetary state, and became inhabitable; and that in this way the earth became what it now is.

"This is the text and basis of the popular and idolized system of Modern Astronomy.

"How the particle first came into existence, and why it did not continue to grow, are questions which of course astronomers are not to be required to answer. [Tell us the dream and we will tell the interpretation.]

"Well, let those who will, serve Baal; but let us follow truth. God tells us, in language unmistakable, how He created the earth, and the orbs of light for its use. 'In the beginning etc.,'—that is, when time commenced. God is a creature of eternity, and eternity knows no time. Time was instituted five days before man, for man, because he was made a creature of time.

"At the beginning of that first day, which was a day of twenty-four hours, as will be easily proven, God by His own

Almighty volition brought the world into existence out of a co-mingled mass of water, earth, etc., for we read that it was 'without form and void.' And it was not till the beginning of the third day that the complete separation of earth and water was brought about, and the 'dry land appeared,' and not till the end of the same day that the planets were created to give light, signs and seasons for the earth. In short, they are the great Clock of Time, and are performing their work perfectly, as we will notice. Hence, you see we had an earth before we had a sun or planet in the heavens, notwithstanding the Newtonian theory to the contrary. While it might take ages for the waves of the sea to toss up the sands of a continent, yet, who would deny that by the power of the Creator the earth was not brought forth in a moment. 'For He spake and it was done, He commanded and it stood fast.'

"So while geologists may figure on the slow process of evolution and germination, there was an Almighty power in the Universe which did bring about suddenly those things we behold. That power was God, and it would be just as reasonable to argue that the loaves with which Christ fed the five thousand had undergone the natural process of baking, as to rob God of His declared creation by belief in the Newtonian—Geological theory, however popular it may be.

"It may not be generally known that the astronomers have not been able to reconcile the different motions of the planets to completely harmonize with their orbital theory; but such is the case. Since Mars is a favorable subject just now, we will briefly take it for illustration.

[In fig. 41 let S represent the sun. The first circle from the sun will represent the earth's orbit with the earth in position at E. The outer circle will represent the orbit of Mars, at M July 29th, 1891; eight months later, March 29th, 1892,

and four months later still, August 3d, 1892, C at opposition. Hence we see the earth is stationary. Mars swings, to and from, far beyond the sun while moving in course with the other planets in her daily circuits around over the earth, her points being indicated by the rise and fall from horizon to

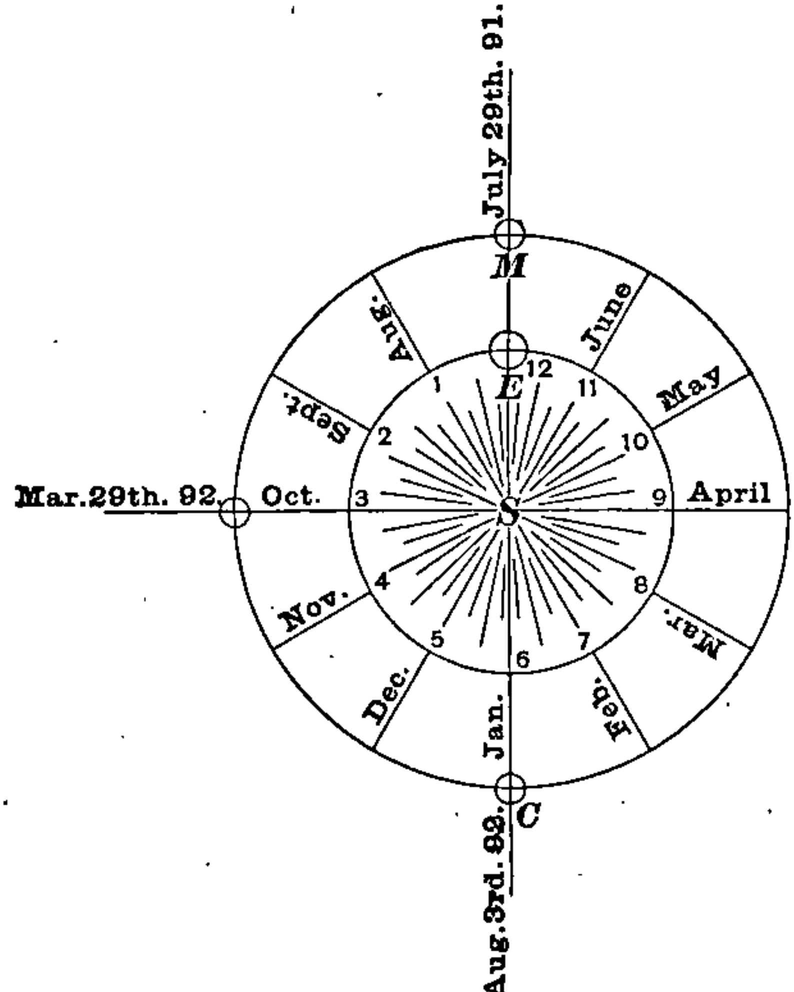


Fig. 41.

zenith and the position of the sun. Mars, like other celestial bodies, is filling an important place in the cycles of time as marked by the heavenly bodies. The comets, too, play an important part, but their strangely elongated orbits are an everlasting contradiction to the Newtonian theory of gravitation. This is a fact confessed by every astronomer of any note. Eclipses of the moon are caused by certain non-luminous bodies of the heavens passing between the earth and the moon,

recurring continually at regular intervals of about eighteen years and eleven days. That there are non-luminous bodies so circulating is admitted by Hershel in his Astronomy, p. 521.]

"There are also many other authorities. There are seventy different eclipses that repeat themselves every eighteen years and a fraction. This cycle of years, with their fraction continually repeated, makes up another cycle, which is an even one every 651 years. Thus, eclipses being but repetitions, their calculation is brought to a simplicity.

"Mr. J. B. Dimbleby, professor of chronology and member of the British Astronomical Society, in his work called "All Past Time," has traced every eclipse back to the creation of the world and verified the fact that the Bible is the most accurate and scientific book that has ever been written. If a single day or date had been incorrectly given therein the error would at once be discovered. It also shows that the Lunar year of 354 days, in which the Biblical chronology is given, was just the same length without a variation at the date of the Flood. Mr. Dimbleby says: 'The first eclipse of the sun took place during the nights of Friday and Saturday of the 1st and 2d of the fourth month in the first year of the world, or the year 0 A. M., which synchronizes consecutively with Friday and Saturday, January 11th and 12th, in each of the consecutive periods of 651 years. In 1861 A. D., the date was the first day of 5860 Astronomical, by counting the first twelve months as year 1 instead of year 0.' [The reader will only have to turn to the tables in the first part of this book to find the tables of Mr. Dimbleby referred to.]

"No matter what the motion of the planets, or wherein their orbits, the opposition may occur, for they do not always recur at the same season of the year, it will be seen that Mars ought always be seen one-half her time on her half orbit repre-

senting her opposition, and the other half of her time on the side of her conjunction. But it has never occurred.

"Now we will take the same eclipse of January, 1861, and give an illustration of the application of the cycle of eighteen years and eleven days; of course there are a few odd minutes also, which, carried out fully, would account for the eclipse not occurring in the same latitude always, but this will be sufficient for the purpose:

Eclipse 1861——1—11
Add 18 yrs. 0—11 days.

Result, 1879——1—22.

Thus, the eclipse of the 11th of January, 1861, should reoccur January 22d, 1879.

"Now consult your almanac for that year and you will find it so given. Notable instances of the eclipses of the moon, mentioned by astronomers being seen when both the sun and moon were wholly visible above the horizon, and when the earth could not have been between the sun and moon, were observed July 17, 1590; November 2, 1648; June 16, 1666; May 26, 1868; July 19, 1750, and April 20, 1838. They attempt to explain this phenomenon by atmospheric refraction. This is deceiving, as we will clearly demonstrate. We quote from Quackenbos', or you may consult any other standard work on the subject if you please.

"'Refraction is that change of direction which a ray of light experiences on passing obliquely from a rarer medium to another. Rays from the heavenly bodies on entering our atmosphere obliquely from a rarer medium are refracted. Let a ray pass from air a rarer medium, into water a denser medium, and it is refracted.' Quackenbos' Natural Philosophy, p. 246-247.

"Hence, as the two conditions are parallel they must follow the same principle and be bent in the same direction. Now, in what direction are rays in air and water refraction turned? That we may not be questioned we will again quote from page 247, something, too, which all may prove:

" 'Place a coin on the bottom of an empty vessel, and fix the eye in such a position that it just misses seeing it on account of the vessel's side coming between. Keep the eye there and let water be poured in; the coin will then become visible.' Thus, the line from eye to coin falling over the rim of the vessel is turned downward through the water in the direction of your feet. Thus, the light from the sun passing into our atmosphere should, if the earth were a globe, pass over the curve of the earth downward and bring the shadow sooner to a point. This also destroys the idea, created by astronomers, of the earth's shadow being increased from 8,000 miles to 59,000 miles in diameter when it reaches the moon, in order to partially explain the eclipse, sometimes of about five hours' duration. But this, even, would not avail them, for with an axial motion of the earth of 1,000 miles an hour, together with an orbital speed of nineteen miles a second, the moon would quickly sail clear again.

"If the earth were a globe the North Star should disappear below the northern horizon as you pass beyond the Equator; but it has been seen from near the latitude of the Tropic of Capicorn. To account for this fact astronomers rush in again with 'refraction' turned the other way.

"Poor foolish men! Cannot they see that this destroys all their work they had wrought out for the moon? When the gun is shooting the one ball two ways at the same time, it cannot be said to center in the target for which it is aimed directly ahead. Better that they renounce it at once;

for that is coming to pass of which Dr. Woodhouse, professor of astronomy, Cambridge, about 1840 wrote: 'If our premises be disputed and our facts challenged, the whole range of astronomy does not contain the proofs of its own accuracy .... and must fall to the ground.'

"Wherever we look we see the followers of the sun worshiper, Pythagoras, plunged into a sea of difficulties on every hand. What must we conclude? Truly the Geologist's Creation is not God's Creation; neither is Newton's Laws God's Laws.

"The earth is a plane, 'For He hath founded it upon the seas, and established it upon the floods.' (Ps: 24: 2.) We have shown you the time from Creation, and in such a way that it forever overthrows every speculative theory, silences the idea of prehistoric animal creation, shows the purposes of the planets in being made subservient to the earth, and therefore, not habitable material worlds.

"We will close this chapter, as we begun it, with some appropriate Scripture: 'There is one glory of the sun, and another glory of the moon, and another of the stars; for one star differeth from another star in glory.' (1 Cor. 15: 16.) 'The heavens, even the heavens, are the Lord's; but the earth hath He given to the children of men.' (Ps. 115: 16.) 'The wise men are ashamed, they are dismayed and taken: lo, they have rejected the Word of the Lord; and what wisdom is in them?'" Jerem. 8: 9.

R. E. L. Lovell.

A Solar eclipse is the result simply of the moon passing between the sun and the observer on the earth. But that an eclipse arises from a shadow of the earth is a *statement* in every respect, because unproved and unsatisfactory. The earth has been proved to be a plane, always underneath the sun and moon, and, therefore, to speak of its intercepting the light of

the sun, and thus casting its own shadow on the moon, is to say, what is, according to natural laws, impossible.

The Rivers Nile, Amazon and Mississippi.

Another striking absurdity to the globular theory is the course of the River Nile, whose mouth is 2,000 miles higher than its starting point. The river starts on the Equator at Lake Victoria and runs *two thousand miles due north* and empties into the Mediterranean sea; the supposed incline of the earth would in fact require the river to lean or incline back from its bed. By looking at any map of Africa you will see that this river is over 2,000 *miles high, vertical,* and *standing* on its *small end at that!* There are thirty more rivers in Asia running into the Arctic ocean. Surely, this *globular* world was a *great invention.*

At about twelve degrees below the Equator, the tributaries of the River Congo and the Nile commence their northward course and terminate at Alexandria in Egypt, thirty degrees north of the Equator. We go west of the source of this mighty river about 75° of longitude and we find thirty tributaries of sufficient note to be laid down on a six-inch globe mat; and many of these rivers bringing their waters from over one thousand miles south of the Equator and depositing into the Amazon, whose mouth is on the Equator.

All of this the globe theorists think to account for by the laws of gravitation. But we will go a little farther north before we return. Go into Asia and we can again count thirty rivers flowing into the Arctic ocean.

Now return to the mouth of the Nile, which is thirty degrees north latitude; from thence 120° of longitude west, on the same line of latitude, to the mouth of the Mississippi. This last, but second longest river in the world has brought its waters from 50° north and deposited on the same line of longitude of the Nile. How is this for gravitation?

CHAPTER XIX.

Degrees of Longitude, South vs. North—the Equator.

A CHALLENGE CONSIDERED.

WE propose in this chapter to notice the propositions and challenges that we have had from numerous sources to prove the earth a plane, in view of alleged and supposed facts, that the degrees of longitude south of the Equator converged into one common center at 90° south. The above requirements are but just and logical, so far as supposition or hypothesis is concerned. In order to show that the challenges are not imaginary, we will just give a few extracts from one who has claimed to entertain esteem for us, only with the exceptional consideration of our heretical views in regard to the earth a plane. For these, however, we expect collocation by many of our friends. As a *considerativo* we will first give the extracts, and consider them the propositions which we will adhere to:

NEW YORK, August 11, 1891.

Alex. Gleason, Buffalo, N. Y.:

"DEAR BROTHER—I have been thinking about you a good deal since I saw you at Fulton, and wondering how you were feeling over the flat earth by this time.... The *idea* that I should ever believe that this earth was flat instead of round as the Creator formed it, or that anybody should ever gather the idea from anything that I have said, that I believed any such nonsense, is, beyond all question, *supremely foolish*. I never did believe it, and the more I study it and understand the true philosophy of the earth, its form, motion, etc., the more firmly I am convinced that my early education was accurate in

that regard, and the more real, pure and *unadulterated nonsense* I see in the fallacious arguments and would-be points made by the zetetic astronomers.

(*a*) "Unless you can show me a diagram representing the flat earth, lighted up by the sun in some way that three-fourths (¾) of *any one* of the parallels of latitude south of the Equator is covered at the same time; (*b*) and until you can show me a government map, made by men of education and learning, in which the meridians of longitude diverge to the south, south of the Equator; (*c*) and until you can prove that it takes ships longer to pass over a degree of longitude south of the Equator than it does to pass over a degree in the corresponding latitude north of the Equator; (*d*) and until you can explain clearly, logically and philosophically how there can be equal night and day from *pole* to *pole* at one and the same time; (*e*) and until you can make a telescope that will bring a ship back to view after it has disappeared over the water in clear weather, and a host of other propositions as unanswerable according to the flat earth theory, please do not state to anyone that Bro. ——, of New York City, leans toward the flat-earth theory. How could I believe it when I see so much in it contrary to the natural laws of philosophy, astronomy, and every-day experience of thousands of men who sail the seas. (*f*)

(*g*) "I hope our little interview at Fulton has had the effect to put a new idea at least in your mind. (*h*) I ask you as an honest man, as I believe you are, to drop the investigation of the flat earth theory with which you find so many common philosophical propositions hard to harmonize, and for a short time *concede the fact* that the earth is round, and then see how many philosophical problems will need to be explained to harmonize with it. (*i*) Just consider it, I say, for a short time, and see if all these matters do not harmonize perfectly with science both philosophical and astronomical, and also with the experience of men who navigate the seas, especially those south of the Equator. (*j*)

"I believe, Brother Gleason, that this theory is (*k*) 'a child of the dark ages'—in fact, I am quite sure it is; for going be-

yond the Christian Era we find the first man who predicted an eclipse was called Thales, who lived 600 years B. C.; (*l*) I say he was the ***first man*** to predict an eclipse which came to pass at the appointed time, and this man Thales, believed in and taught the sphericity of the earth, but later on when we come to the thirteenth century is where we have strong historical testimony that they believed the earth to be flat.

(*m*) "*When Columbus conceived the idea* [!!] that the earth was round they mocked him and laughed him to scorn for thinking so. Notice also Galileo in the same. (*n*) .... I believe in my heart it is from the enemy who is trying in every way to deceive us, to predjudice minds against the truth and influence the servants of God. If I had not met you and talked with you, so that you know who I am and I know who you are, I would not thus take interest in writing you. I want to see Bro. Gleason be himself again, as he was before this idea reached him.

"If you have time and it is convenient for you to write me a few lines I shall be very much pleased to hear from you."

Yours very truly,

—— —— ——.

We do not offer a public reply to this kindly-disposed letter because of any feelings of retaliation, but because, first, we believe there is not one demonstrated fact existing that cannot be demonstrably explained on the principle of the earth a plane, if the fact is a relative one, and explainable on any known principle.

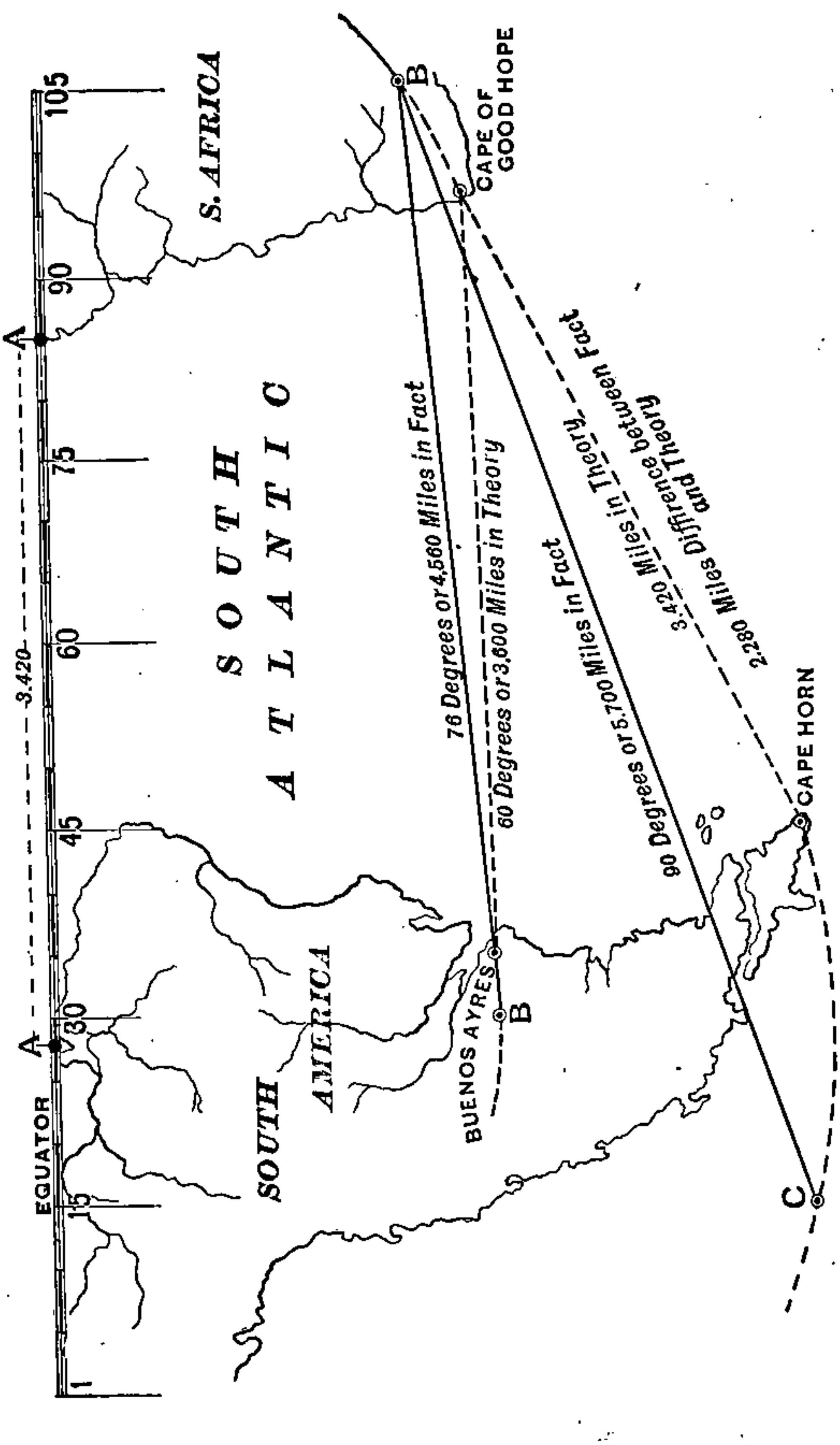
At the writing of my friend's pertinent letter I did not have some of the demonstrated facts from just the standpoint from which he, with others, demanded; therefore, I have carefully retained his good letter, though I did not cease my investigations according to his importunacy together with many other earnest solicitations and sarcastic denunciations. The truth has not yet spoiled, and we have it fresh and beautifully harmonious to-day, And as we now think that this illustration will be

our last one by diagram for this book, though by far not minor in importance, we kindly ask the reader to folllow us through carefully and patiently, noticing the evidence from that source required by our opponents, or those, who like ourselves, have demanded proof and nothing "conceded." As we have lettered the points in our friend's letter, we will notice them in order. For the first designated as "a," we will refer the reader to chapter fifteen of this book, diagrams 26, 27, 28, and as he, with others, require some government or official authority, we give Prof. J. Morrison, of the Bureau of Navigation and Navy Department, Washington, D. C., and the Encyclopædia Brittanica and the navigators' records of South-sea voyages, etc., by Sir James Ross. The corresponding nights and days in South-sea latitudes, of which he referred to, will be found in the same chapter; this also covers requirement "b."

A few of our most radical friends have made the following very fair proposal and concession, namely: If it can be shown that the degrees of longitude are *less* in Australia or *anywhere* south of the Equator than upon it, there can be no question but that the earth is a globe in form, and if it can be shown by actual measurement that these degrees of longitude lengthen or diverge from each other as we go south from the Equator, it must, with equal force and reason, be admitted that orthordox geography is untrue, and the supposed configuration of the earth a myth.

We are now ready to offer our final evidence for the consideration of all parties.

Following is the coast tracing of the west coast of South Africa, also eastern coast of South America, each bearing its relative position to each other in both latitude and longitude, and relative positions on the Equator. We style the illustration fig. 42. We will further state that this tracing is from a



S. AFRICA
CAPE OF GOOD HOPE
B
A
105
90
75
60
45
30
15
1
EQUATOR
3,420
SOUTH ATLANTIC
SOUTH AMERICA
BUENOS AYRES
B
CAPE HORN
C
76 Degrees or 4,560 Miles in Fact
60 Degrees or 3,600 Miles in Theory
90 Degrees or 5,700 Miles in Fact
3,420 Miles in Theory
2,280 Miles Diffrence between Fact and Theory

Fig. 42.

small-sized globe map, which we preferred for convenience, but it will be found to agree very closely, so far as relative coast-lines, latitude, longitude and distances are concerned, with the best maps known.

We have made a scale of degrees of longitude from Washington east to the meridian of 105° on the continent of Africa. Now, if we take the extreme distance on the Equator between Africa and South America, we find it to be 56° of longitude, and these equal 3,360 miles from A to A on the scale, but if we allow the globe theorists all they claim for curvature, it would be about sixty miles more, and thus it stands on the scale, 3,420 miles. Now, if we measure the distance between Cape of Good Hope on the scale and Cape Horn, we will find the two distances to very closely agree. Now, if one inch represents one thousand miles on the Equator, on water, it certainly represents one thousand miles in every other place on the same globe scale. We next take the distance from Cape of Good Hope to Buenos Ayres, which is 60° or 3,600 miles, according to the same scale or any other globe scale in the land made by "scientific and educated men." So much for authentic theory, and we will next see what the authentic, practical, and experienced navigator says in regard to these distances and *the very shortest time* ever made between these places by the best class of steamships, built by the best builders that Europe affords, and at the expense of the East India Government.

In order to procure these facts it has taken considerable time, and no expense has deterred us from securing facts which is now a great relief and pleasure to give to the world. We trust the reader will bear patiently with us while we give the demonstrated facts in the case.

About the middle of November, 1891, I put the following notice in the New York *World:*

Wanted—The address of an unlimited number of navigators or sea-faring persons who have made the voyage or voyages between the following places, and can give the distances in knots, and approximate time in days, of making the several voyages: No. 1—Cape Town, Africa, to Buenos Ayres or Montevideo. No. 2—Cape Town, Africa, to Cape Horn, etc.; others of which we will not take time to mention, of which we have time, measurements, etc.

From the most experienced, or he who furnished the best references, we selected the information; no one knowing for what purpose we wanted the desired knowledge, or anything in regard to our views. The following became my informant in regard to the desired information:

53 Woodward Ave., South Norwalk, Ct.,
November 23, 1891.

Alex. Gleason, Esq.:

Dear Sir—Seeing the inclosed [which he cut from the paper advertisement] I wish to say that I can give you the required information, having served in the Cape Horn, west coast of South America, and Australian trade for several years, as second officer of steamer Lochinvar, Abbey Town and Palgrave. Awaiting further information concerning your terms, believe me Respectfully yours,

Charles B. Browne.

[Reply to my second letter.]

Dear Sir—In reply to your letter received to-day, I wish to state to you how far I can meet your requirements. First, to satisfy you *that I am what I claim to be,* and qualified to give you all the information required, the number of my certificate is 014358, licensed on June 4, 1884, in London, England, by the Lords of Privy Council for trade. Second, certificates of discharge: No. 1, four mast steamship Palgrave; No. 2,

steamship Compta; No. 3, ship Huron, put back disabled; No. 4, transferred to Abbey Town, bound to South America and N. S. W., and Chili, South America. Served on this voyage from October 6, 1886 to October 7, 1887. This is the date of my last official discharge. The above certificates are now in my possession.

From charts used during my service in the ships named, I can give you all the information required; but cannot from ship's log book....At the same time, I can and will gladly give you all the information you want from my charts.... Thanking you for enclosed, believe me,

Yours respectfully,

CHARLES B. BROWNE.

P. S.—I have also letters for service and ability, signed by Captains Dunn, Tullis, Thomas and Andrus, and Chief Officer Adams. C. B. B.

[THIRD LETTER, DECEMBER 10, 1891.]

Alex. Gleason, Esq.:

DEAR SIR....The courses and distances are all taken from charts used in steamships Lochinvar, Abbey Town, Compta and Palgrave. I would state that the distances are in all cases worked to geographical or nautical miles, sixty of which are equal to sixty-nine and one-fourth English miles. You are, no doubt, aware that there is 6070 feet to the nautical mile; this is often the cause of dispute with regard to the distance from port to port, many people not being aware of the difference between a nautical and statute mile. Distances, course and time are as follows:

First—*Cape Town* to *B. Ayres*; course, west by 6° south; *distance*, 4560 miles. *Best time* record known, steamship Lochinvar, Capt. Shelly, 13 days, 13 hours, 45 minutes.

Second—*Cape Town* to *Cape Horn;* course, west by 24° south; *distance*, 5700 miles. *Best time* on record, Abbey Town, Capt. Tullis, 13 days and 23 hours.

Yours respectfully,

CHARLES B. BROWNE.

It would be useless to weary the patient reader with all the details of voyages, distance and time that this navigator has given to Aukland, N. Z., Sydney, Australia, etc. But it is well worth while to now consider the above carefully.

First—If we take any globe map of the world and measure the distance from the Cape of Good Hope to Buenos Ayres, we will find it from 180 to 200 miles further than it is from Cape of Good Hope to Cape Horn. Bear this in mind. The navigator says that from Cape Good Hope to Cape Horn is 5700 miles, and he gives the course. This would throw Cape of Good Hope, South Africa, back to B and South America back to C, and make that distance, which theory shows to be the least by about 200 miles, the greatest by 1,140 miles.

Second—We will notice that at A A is represented a pin head on the Equator and on the coast lines of the two continents; this would hold the two coast lines in position on the Equator, which is an undisputed point. But if we take these continents and open their southern points to B. C. it will give the degrees of longitude that divergency required on the principle of the earth a plane, and Capt. Browne would be all right with his Mercator charts. But what has become of our New York friend's requirements in regard to the degrees of longitude? This we will see further on as we examine the ship's time record.

To the above fact I wrote Captain Browne, calling his attention to this discrepancy of distance, and after waiting until a reply was past due, I wrote a second letter, stating that perhaps there was some mistake in the figures, thinking they had got them transposed by some means in giving the numerous calculations. I stated to him that I had measured the distance on several globe maps with a fine steel line and they all told the same story. Further, I did not wish to publish a mistake

of this kind, if such it was. To this last, and the first, I received the following pert reply:

February 14, 1892.

Alex. Gleason, Esq.:

DEAR SIR—I have received both your letters. But having been away from home in my steamer, and when at home, very busy, I have been unable to attend to your request before this. In reply, would say that I don't pretend to know anything about working nautical questions with a tape-line. Furthermore, am very much surprised to learn from you that Cape Horn is 200 miles nearer Cape Town than Buenos Ayres. I don't take nearest points when working these questions, but degree of latitude and longitude. And if the following latitudes and longitudes are wrong, then the Admirality Charts in my possession are wrong:

Lat. of Cape Town . 34° 24′ S.	Long. of Cape Town . 18° 32′ E.
Lat. of B. Ayres . . . 34° 30′ S.	Long. of B. Ayres . . . 58° 00′ W.
Lat. of Cape Horn . 55° 59′ S.	Long. of Cape Horn . 67° 12′ W.

If you can make Buenos Ayres 200 miles nearer Cape Town from these figures, there is no need for me to work any questions for you. Please take notice that the questions worked for you were done so by Mercator's Sailing Chart, which is our usual way of finding course and distance from point to point. Allow me to say that Cape Horn is nothing more than a rock, so whatever point you take don't amount to a *row of pins.*

Yours respectfully,

CHARLES B. BROWNE.

It was my interrogatory letter that has called forth these statements from Captain Browne, which to his mind did not amount to a "row of pins," and perhaps had he previously known my purpose in calling forth these responses, the value of what I would have gotten from that source would have been less than the estimate that he has put upon it. Nevertheless, Captain Browne is all right with his charts, his degrees, his latitudes and longitudes, also the time record's which we next notice.

Before going too far with the considerations of the relative or comparative time, mentioned by our challenger in the forepart of this article, under the indicator C, it will be necessary to notice the very best time ever made by the best crafts that float the northern seas, and perhaps the medium, also. We have entered no confederacy with steamship lines, but have procured some catalogues from which we have clipped two leaves for the benefit and interest of those who wish to be informed on these matters. First, we give one abstract of log, "Norddeutscher," Lloyd's Steamship Line, Captain H. Hellmers, from Southampton to New York.

1889 DATE	LAT. N.	LONG. W.	DIST	WIND.	REMARKS.
Aug. 22					Left Southampton and passed Needles at 5.50 P. M.
" 23	49°50′	9°54′	330	WNW	mod. wind, cloudy, rough head sea.
" 24	49°58′	21°28′	446	W.-S.	mod. wind and sea, cl'dy, rough swell
" 25	49°11′	33° 0′	452	E.N.E.	moderate wind and sea, overcast
" 26	47°10′	43°55′	453	SSW-NW	light wind and sea, overcast—foggy, rain.
" 27	44° 9′	54° 4′	463	Northerly	moderate wind and sea, clear.
" 28	41°48′	64° 7′	462	NW-SE.	light wind and sea, clear.
" 29	To	S'y Hk	454	Easterly.	moderate wind and sea, rainy.

Total distance, 3060 sea miles.

Arrived at Sandy Hook, August 29th, at 11.40 A. M.

Passage.......... 6 days 17 hours 50 minutes.
Difference in time 4 " 52 "

Actual time 6 days 22 hours 42 minutes.

Average speed: 18.36 knots. Equal to 6 days 8 hours from Queenstown.

We give the above log, that the readers may see and be able to judge, in regard to variations of the vessel's course from point to point or port to port.

The following is a copy *verbatim* from the Hamburg-American Packet Company's catalogue, J. W. Klauck, agent, 70 Exchange street, Buffalo, N. Y.:

SPEED—These steamers have at once stepped to the front rank among ocean greyhounds, and must be counted among the fastest ships afloat. The best time accomplished was six days and twelve hours from New York to Southampton, being the fastest trip ever made between these two ports. This is equal to a trip of five days and twenty-one hours from New York to Queenstown, Southampton being about 300 miles east from Queenstown. The time by rail from Southampton to London is two hours. The landing arrangements at Southampton are considered superior to those of any port in England, the trains starting from the docks and the Hamburg-American Packet Company's special trains awaiting the passengers there. During the past three years steamers have maintained a regular fast weekly express service between New York, Southampton and Hamburg, taking passengers to *London within seven days, and to Hamburg within eight days*, while the actual average ocean passage is reduced to a little more than six days. This line, according to the annual report of the United States Superintendent of Foreign Mails, takes the first place over all others in the conveyance of the mails between New York and London. Their great regularity is indicated by the fact that almost all trips were made within a margin of a few hours. The arrival at New York, Southampton or Hamburg can therefore be easily forecast.

Passengers leaving New York on Thursday are landed in Southampton on the following Thursday, reaching London on the same day, thus bringing them from New York to London in less than a week (it has been done in six days and 16 hours, a feat not equalled by any other line.) This shows the wonderful convenience which these steamers offer to the traveling public.

The fastest runs were about twenty and three-fourths knots per hour, which is equal to 23⅞ English miles, and exceed the speed of transcontinental trains.

SPECIMEN RUNS.—FROM NEW YORK.

Furst Bismarck, June 18, '91	6d. 12h. 58m.
Columbia, Oct. 9, '90	6d. 15h. 0m.
Normannia, Nov. 20, '90	6d. 17h. 03m.
Augusta-Victoria, Sept. 18, '90	6d. 22h. 32m.

FROM SOUTHAMPTON.

Furst Bismarck, May 9, '91	6d. 14h. 15m.
Columbia, June 27, '91	6d. 15h. 58m.
Normannia, May 23, '91	6d. 16h. 45m.
Augusta-Victoria, Oct. 2, '90	6d. 22h. 30m.

We will consider first, the build of these South-sea steamers as compared with those of our latest pattern. We are informed by the agent, Mr. J. W. Klauck, and others tell us that these South-sea steamers are all built by the same class of builders, or same building company, on the Clyde in Europe. The steamship Abbey Town, we were informed by Capt. Browne, was built by the East India government for this special southern trade, and it is this that gives the best time on record in the southern seas. Between New York and Hamburg, and Cape Town and Cape Horn, there is but about 1° 30′ difference, or say 100 miles, according to the globe measurement; that is, if we measure the difference from Hamburg to New York on a globe map with dividers, then place them on Cape Town and they will only lack about one degree and a half of reaching Cape Horn. Now, so far as danger or contingencies are concerned in making the voyages in a given equal time, the one preferred to the other, the South Sea has the advantage. This is shown on the navigator's charts, both in currents, rocks, shoals, islands, etc. This can be seen on the ordinary Mercator map of the world.

The question now resolves itself to this: On the globe principle, Cape Town to Cape Horn 3,600 miles; best time *ever made* 10¾ miles per hour, 335 hours=3,601 miles. If the above be true, the Cape Horn steamer was *six days* making

up that existing difference of one hundred miles in distance, under the most favorable circumstances, and this the *very best time ever known!*

We will now look at the matter from another standpoint. We will allow the northern navigators all they claim for distance and time. We now ask that the southern navigators and nautical inspectors be allowed their moderate claims for both time and distance, namely: Cape Town to Cape Horn, 5,700 miles. Time: 13 days 23 hours=335 hours at 17 miles per hour, 5,695 miles. Is it not as possible for the South Sea vessel to make seventeen or eighteen miles per hour in an extreme case, as it is for the northern to make twenty or twenty-one miles per hour? We leave this for you to answer.

Inasmuch as we believe that we have, not only in this article, but previous ones, given sufficient evidence to more than overbalance every reasonable objection to our position, we will only ask of him who is still skeptical, the same that has been asked of me. "Just stop and consider it, I say, for a short time and see if all these matters do not harmonize perfectly with philosophical and astronomical, and also with the experience of men who navigate the seas, especially those south of the Equator."

(*k*) As to the "child of the dark ages" we have a few words to say.

The Philosophy of Thales.

Thales, says our encyclopædias, a native of Miletus, in Ionia, or according to some, of Phœnica, the earliest philosopher of Greece and founder of the Ionan school, was born about 640 B. C., died about 548; hence, he was about ninety-two years old at death. His philosophical doctrines were these:—He considered *water*, or rather fluidity, the element of *all* things. He taught that all natural phenomena are produced by

the condensation and rarefaction of water, and are resolvable into this element. Earth is condensed water, air is rarefied water, and fire rarefied air. If then, water is the origin of all things, it must not be considered as dead matter, but as a life-giving principle, which he also called the *soul of the world* or the *Divine principle.*

Thales taught that the universe was pervaded by demons or spirits (not far out of the way here), and assigned a soul to inanimate objects. That this creative, moving, forming power was necessarily diffused and at work throughout the universe as an essential property of the original principle. Says the Encyclopædia Americana: "The story that he foretold an eclipse of the sun, although he may only have indicated the year of its occurrence, implies a more correct knowledge of the Solar system that he and his disciples appear, from the statements of Plutarch and Diogenes and Laertius, to have possessed; that is, supposing his prediction to have been founded on his own observations and calculation."

If we return to the last part of chapter seventeen and compare the record of Thales with that of Pythagoras, we shall find a very striking resemblance in the character of the two, so far as their ideas of Divinity were concerned, at least, we are compelled to believe that they were from the region, not only of the "dark ages," but mythological demons, inspired by Beelzebub, their chief and founder of the whole system of paganism, to which so many tenaciously cling.

CHAPTER XX.

The Closing Consideration. A Peculiar People.

THERE is a people scattered abroad throughout the earth, with whom I have had an acquaintance for over thirty years, who claim to be the antitypical Israel, and the depositaries of God's laws. They believe the promises are due to them on this wise: "Know ye, therefore, that they which are of faith, the same are the children of Abraham." (Gal. 3:7.) "Now to Abraham and his seed were the promises made. He saith not, and unto seeds, as of many; but as of one, and to thy seed, which is Christ." (Sixteenth verse.) "And if ye be Christ's, then are ye Abraham's seed and heirs according to the promise." (Gal. 3:29.) This people also believe that they are giving the last notes of warning prior to the appearance of Him of whom it was said: "Whom the heavens must receive until the restitution of all things, which God hath spoken by the mouth of all His holy prophets since the world began." (Acts 3:21, Matt. 24:14, Dan. 2:44, 7:27.) The latter quotation covers complete their anticipated hopes and joys of this present life and that which is to come. "And the kingdom and dominion, and the greatness of the kingdom under the whole heaven, shall be given to the people of the saints of the Most High, whose kingdom is an everlasting kingdom, and all dominions shall serve and obey Him." [Christ.]

Further, this people claim to be giving that everlasting Gospel, styled the "Third Angel's Message" of Rev. 14:6–12. Some prominent ones among this people have taught that this

subject of the shape of the earth was no part of the "Third Angel's Message," and therefore no part of the truth for them to receive; consequently, they are to have nothing to do with it. It has been an adage with some truth-loving people, that an *unpopular truth* was more acceptable than an unpopular error. We do find some, sorry to say, that cling to the popular error, at the sacrifice of the unpopular truth. While some are declaring that they have nothing to do with the matter, yet we still hear them preaching the Earth a Globe, and are teaching it from their high schools and colleges. Now, this has long been their motto: "To the law and to the testimony: If they speak not according to this Word, it is because there is no light in them." Isa. 8:20.

Having briefly noticed the future hope and reward of this people, we wish their forbearance while we notice the characteristics they are to bear.

We would not by these words assume the prerogative of a leader or teacher of this people. God's Word will *teach* and *lead* all that will be led or taught by it. But allow me to call attention to that which is your delight and that which so many of you know so well. We ask what was to be the character of the church when presented to the Master? Ephesians (5:27) will tell us plainly, "That He might present it to Himself a glorious church, not having spot, nor wrinkle, or any such thing; but that it should be holy and without blemish." Is the remnant to teach the truth only? We will let Zept. (3:13) answer: "The remnant of Israel shall not do iniquity, nor speak lies; neither shall a deceitful tongue be found in their mouth. ...." Allow a few more citations. What does the angel say to St. John? (Rev. 14: last clause of the 4th verse.) "These were purchased from among men, to be the first fruits unto God and unto the Lamb. (5) And in their mouth was

found *no lie;* they are without blemish." (N.V.) The Revelator says: "Blessed are they that do His commandments, that they may have right to the tree of life, and may enter in through the gates into the city." He also says, that without are "every one that *loveth* and *maketh* a lie."

"Lord, who shall abide in thy tabernacle? who shall dwell in thy holy hill? He that walketh uprightly and worketh righteousness, and speaketh the *truth in his heart.*" (Ps. 15: 1, 2.) Actions, many times, speak louder than words; then, this being true, may not inspiration refer to the same? Yes, or "taketh up a reproach against his neighbor." (Last clause 3d verse.) I understand by this: He who carries reports, whether he can sustain them or not by the Word, does it at a peril.

The Lord says by the Prophet Zechariah: "These are the things ye shall do; speak ye *every man* the truth *to his neighbor.* ...." (Zech. 8:18.) Then, can we teach our neighbors or family that which is not truth, and be clear in the sight of heaven; and further say "that the Bible was not given to teach astronomy," and that "it makes no difference to me whether this earth is flat or round?" True, it may not make any difference to us in regard to its shape, but it will make a difference whether we speak, think, act and teach the truth or a *lie.* Christ says, "I am the way, *the truth,* and *the life;* no man cometh to the Father but by me." If we earnestly desire, seek and strive for it, the spirit of truth will guide us unto *all* truth. (See John 16: 13.) Then, in view of even the very few declarations above given, do not say that the message and mission that we have to perform is separated from any truth necessary for us to believe and maintain against the author, and the refuse of lies which are to be swept from the earth.

In order to harmonize the Scriptures to suit modern science,

falsely so-called, the world has gone contrary to all true principles of interpretation; thus have they made the literal rendering of no effect. We give an extract taken from an editorial in the *Signs of the Times* for May 19, 1890:

1. "The Bible does not simply *contain* the truth, but it is the truth and the whole truth. And whatever disagrees with the Bible, *whether it be in the realms of morals or science*, must be false.

2. "When a position taken in regard to any text is consistent with the entire Bible, that of itself is evidence that the position is correct.

3. "The Bible must interpret itself; *it cannot need the addition of matter outside of itself.*

"Terms used in one place in the Bible with a certain signification, must have *the same meaning* attached to them in every other place where they occur, provided the same subject is under consideration." We say—Amen!

On the above principles let us examine a few texts of the Word, and if we cannot maintain the above principles, then let us forever *cease* to *contend* or *maintain* the *literality* of the Scriptures and meekly take our position with that class of investigators spoken of in 2 Tim. 3:7: "Ever learning, and never able to come to the knowledge of the truth."

(*a*)—(Joshua 10: 12, 13.) When Joshua spoke to the Lord and commanded the sun and moon to stand still did he mean the earth?

(*b*)—Thirteenth verse: "And the sun stood still and the moon stayed. . . ." Is it true? Or did the earth stand still?

"Add thou not to His words lest He reprove thee and thou be found a liar." Prov. 30: 6.

(*c*) Psalms 19:1–6. In speaking of the glory of the *heavens* the Psalmist says: "In *them* hath He set a tabernacle

for the sun; which is as a bridegroom coming out of his chamber, and rejoiceth as a strong man to run a race. HIS GOING FORTH is from the end of heaven, and his CIRCUIT unto the ends of it. ...." Could our globe friends find such a testimony as this in the Scriptures for their side of the question, we would have to acknowledge that we knew of no *rules* of interpretation for the Word of God. Has inspiration used a medium through which to communicate to mortals, that would use other words than His, and words calculated to deceive? I cannot believe it! This would-be science tells and teaches that it is the earth, and not the sun that moves. Then why not say so in that Word that describes the glory of the heavens? Is it in the heavens that He set a *tabernacle* for the *earth?* Is it the *earth*, whose going forth is from the end of heaven, and his circuit unto the ends of it? (*d*) But, tenacious for your early instructions, and not content with other positive evidence to the contrary, you refer me to Job 26:7, which says: "He stretcheth out the north over the empty place, and *hangeth* the earth upon nothing." Dr. A. Clark says that the Chaldean version renders it thus: "He layeth it upon the waters, *nothing* sustaining it." This harmonizes with Ps. 24:2: "For He hath *founded* it upon the seas, and established it upon the floods." (*e*) Ps. 78:69, says: "And He built His sanctuaries like high places, like the earth which He has established (margin, *founded*) forever." (*f*) Does God here compare His tabernacle or sanctuary (dwelling places; synonymous terms), to something that was flying through space faster than a cannon ball, and turning around at the same time at the rate of more than a thousand miles per hour? Or should we understand Him to mean the sun, when He said *earth*? (*g*) "But He hangeth it upon nothing," is what you claim. Yes, and so do I! He done just as He said He did "Founded upon the

seas, ... Nothing sustaining it;" (nothing is a *nonentity;* then, no human thing sustained it.) You next demand the foundation of the seas. Well, I will give you just what God *says* about that, and I do not think that I am authorized to go beyond, for, "The secret things belong unto the Lord our God, but those things which are revealed [in His Word], belong unto us, and to our children forever, that we may do all the words of this law." (Deut. 29:29.) Now, the Prophet Jeremiah will be responsible for the following declarations, for he declares that it is a "Thus saith the Lord:"

"Thus saith the Lord, which giveth the sun for a light by day and the ordinances of the moon and of the stars for a light by night, which divideth the sea when the waves thereof roar. The Lord of hosts is His name. If those ordinances depart from before me, saith the Lord, then the seed of Israel also shall cease from being a nation before me forever. Thus saith the Lord; if heaven above can be measured, and the foundations of the earth searched out beneath, I will also cast off all the seed of Israel for all that they have done, saith the Lord." Jer. 31:35-37.

Yes, truly we may infer from the declarations of God Himself, and His Infinite works and wisdom, that if *finite* man, the work of His hands, formed of the dust, can search out Infinity, then Infinity has no more use for Him, and he is independent of Him who formed him.

We can only say in conclusion, and this with the utmost confidence and with God's Word to sustain us, that—first, there is foundation beneath; second, the heaven of heavens are above. Also, the everlasting bounds of ice that cover the deep are below the heavens. "The waters are hid as with a stone, and the face of the deep is frozen." (Job 38:30.) "Hast thou perceived the breadth of the earth; declare if thou

knowest it all." (Job 38: 18.) "He hath compassed the waters with bounds until the day and night come to an end." (Job 26: 10.) The R.V. has it thus: "He hath described a boundary upon the face of the waters, unto the confines of light and darkness." We cannot refrain from a few remarks on these harmonious quotations; there is no ambiguity here; there is no evading the conclusions if honestly considered by those who revere the Word of God. First—it is true that day and night *do not* come to an end at the north, for it is well known to those living in Spitzbergen (as shown heretofore in this book) that there is three and a half months day. Therefore, when day begins, night ends, and *vice versa*. Then no spot on this earth north of the Equator does night and day end. But the infallible Word of God says that those "confines or bounds are upon the face of the waters."

Now if the "bounds" are on the face of the waters, certainly they are the one side or the other of the Equator. "That path (or bounds) no bird of prey knoweth, neither hath the falcon's eye seen it; the proud beasts have not trodden it, nor hath the fierce lion passed thereby." Job. 28: 7, 8. (R. V.)

Sir James Ross advanced to 78° 10′ south and there traversed a wall of ice (estimated to be a thousand feet thick and from 150 to 200 feet high) for 450 miles without a crack or crevice sufficient for a row-boat; gave up the search for any passage and returned. No human being, before nor since, has passed that wall God in His wisdom built, and He has said, "Hitherto shalt thou come, but no further; and here shall thy proud waves be stayed." (Job. 38: 11.) In conclusion, suffer a few words, though in substance it has been repeated in this book; they have reference to the northern bounds as compared to the south.

"The North Polar Basin is circumscribed by the line of

eighty degrees. Within the latter is the open Polar Sea, which is nearly 1000 miles in diameter. Sir Edward Parry with *open boats* advanced in it toward the north to the latitude of 82° 45′, or to the proximity of 435 miles from the center, the nearest point ever reached by man. [This was between 1827 and 1829. Since that time, on May 13, 1883, Lieut. James B. Lockwood and Sergt. Brainard pushed north to 83° 24′. See following article by Mr. Lovell.] The current flowing south was so rapid that it completely neutralized the northward progress effected by rowing, and the unsuccessful attempt was abandoned. Dr. Hayes reached 81° 35′ or within 505 miles. Mr. Morton, of Kane's expedition attained 81° 22′ or within 518 geographical miles.... Both Hayes and Morton, as far as they could observe, found *no ice*, but on the contrary, a warm open sea. *Birds were flying north.* Snow had melted from the mountains, leaving them clad only with a thin covering of ice.... The established line of greatest cold on the American continent is 700 miles south of the North Pole, and on the Asiatic 625 miles south." Prof. F. Miller's great lecture, "Harmony of the Bible and Natural Philosophy," page 45.

We have seen by the above where the north boundary or limit of cold existed, and passed that extreme into that place inhabited by the birds of a genial climate, to an open sea, and there we leave those considerations of the two extremes of North and South.

There remains another passage that has been misconstrued to prove the earth a globe, and has went the rounds of the papers, but has no bearing whatever. In order to show this we will take its connections. We will first look at Job 38: 12, "Hast Thou commanded the *morning* since thy days, and caused the *day-spring* to know his place. (13th.) That it might take hold of the ends of the earth, that the wicked

might be shaken out of it? (14th.) It is changed as clay to the seal; and they stand as a garment." In the new version, the fourteenth verse reads, "It is changed as clay under the seal, and *all things* stand as a garment." Dowa version reads, twelfth verse, "Didst thou since thy birth command the morning, and show the dawning of the day its place. (14th.) The seal shall be restored as clay, and shall stand as a garment. (15th.) From the wicked their *light* shall be taken away."..... How these expressions can be made to apply to anything but the *light* and its source, is beyond my comprehension.

I will now close my remarks by quoting a few short paragraphs from a writer well known to all of that people of which I have referrèd:

"The truth and the glory of God are inseparable; it is impossible for us, with the Bible within our reach, to honor God by erroneous opinions. Many claim that it matters not what one believes, if his life is only right. But the life is moulded by the faith. If light and truth are within our reach, and we neglect to improve the privilege of hearing and seeing it, we virtually reject it; we choose darkness rather than light. 'There is a way that seemeth right unto a man, but the end thereof are the ways of death.' (Prov. 16:25.) Ignorance is no excuse for error or sin, when there is every opportunity to know the will of God." Great Controversy, p. 597.

In Revelation 21:22 (referring to the New Jerusalem after it had descended to the New Earth), the Revelator says, "And I saw no temple therein, for the Lord God Almighty and the Lamb are the temple of it." The 23d verse, latter clause says, "For the glory of God did lighten it, and the Lamb is the light thereof." In 22:3d verse we read, "And there shall be no more curse, but the throne of God and the Lamb shall be in it,

and His servants shall serve Him (4) and they shall see His face, and His name shall be in their foreheads." In "Great Controversy," edition of 1888, pages 676-678, are the following remarks upon the above references:

"The people of God are privileged to hold open communion with the Father and the Son. Now we 'see through a glass darkly.' (1 Cor. 13: 12.) We behold the image of God reflected as in a mirror, in the works of Nature and in His dealings with men; but then we shall see Him face to face, without a dimming veil between. .... With undimmed vision they gaze upon the glory of creation, *suns*, and *stars* and *systems*, all in their appointed order circling the throne of the Diety."

Now we ask, if anyone can so construe the above quotations and language spoken, as to place the Throne of God and His Son anywhere else than on this earth, when the "restitution of all things" shall have taken place? Advocate it who will, I cannot.

In preparing this work for the public, the author has aimed for the diffusion of that class of knowledge and information, which in its nature should contribute to liberty of the God-given conscience. If this effort shall contribute to enlarge our views and destroy prejudice, I feel assured that I shall receive the most gratifying reward for the few laborious days which have been devoted to the task of gathering these, disconnected though they may be, yet, vital and important facts.

ALEX. GLEASON,

JANUARY, 1893. *1201 Niagara street,*

BUFFALO, N.Y., U. S. A.

SOME POINTS FROM POPULAR SOURCES,

Selected and Furnished for this Book, Together with Additional Remarks, by R. E. L. J. Lovell, Vadis, W. Va.

THE polar night in the highest latitudes begins in October and lasts till nearly February. Then the sun appears each day, at first for a few moments only, and then longer and longer, till by May it does not set at all. For three months there is perpetual day—May, June and July. By the end of June the ice of the Arctic seas is commonly divided and scattered. Then there is excessive moisture everywhere. July is a bright month, and in sheltered spots the heat may become excessive.

"Lieutenant James B. Lockwood and Sergeant Brainard pushed north to latitude 83° 24′, to an elevation 2,000 feet above the sea. The time was May 13, 1883. Curious as it may seem, there was no absence of animal life. Hares, lemmings, ptarmigans, snow birds, snowy owls, polar bears, musk-oxen, and even vegetation were found. The potato is cultivated in favored spots in South Greenland, also turnips, cabbage, salad and spinach. Barley grows, flowers bloom, berries mature, grasses grow on the slopes and along the fiords. Beech, birch and willow are found. (Greenland is enclosed by two Arctic currents). Man has never yet gone northward of a spot where vegetation of some kind does not exist.

"What a contrast is presented in the Antarctic regions! No plant of any kind, not even a lichen or moss, has been found within 64° 12′ south latitude, and while even in Spitzbergen

vegetation ascends the mountain slopes to a height of 3,000 feet, the snow line descends to the water's edge in every land within the Antarctic Circle. And as to quadrupeds, no four-footed animal has ever been found beyond 60° of southern latitude. Antarctic navigators, with one exception, have failed to penetrate the ice barriers of the southern seas further than to the comparatively low latitude of 78° 10′. The short, warm summer of the North which cracks the ice floes, starts rivulets upon the glaciers, encourages a burst of hearty flowers and grasses, invites all animal life to an annual visit, which is unknown around the South. Only in one spot, to the east of Newfoundland, has a northern iceberg been known to descend as far south as 39°. In the Southern ocean they have been found off the Cape of Good Hope in latitude 35°, opposite the mouth of the Rio de la Platte, and within 300 miles of Tasmania.

"In 1775 Captain Cook discovered South Georgia, in latitude 55°—not so far as Labrador or Iceland, north. 'We saw not a river or stream,' he says. 'All the coves of the bay were the heads of glaciers of great height, from which pieces were continually dropping and floating out to sea. Wild rocks raised their lofty summits till lost in the clouds, and the valleys lay covered with perpetual snow. Not a tree was seen, nor even a shrub large enough for a tooth-pick. The only vegetation visible was a moss and a tufty grass which sprang from the rocks.'

"Before this description could apply to northern lands, we must go to Nova Zembla, to Spitzbergen, or as far as man has gone up the west coast of Greenland. At Kerguelen Land, 50° south, Cook found the ground covered with snow in the middle of the southern summer. In Europe, the most southern glacier which comes down to the sea, is on the coast of Nor-

way, 67° north latitude. In the Gulf of Penas, on the west side of Patagonia, in latitude 46° 50′, the same as that of Geneva, north, is a glacier fifteen miles long and seven wide, descending to the coast.

"In 1839, Dumont d' Urville sailed ninety miles along a lofty coast and named it Adelia Land, latitude 61° 30′", says 'People's Cyclopædia,' page 111. It is a dead and desolate country, without a sign of vegetation. In 1840 Wilkes struck another part of this ice-bound coast, since called Wilkes' Land, which he traced for 1500 miles.

"Captain Ross, on January 9th (equivalent to our July), at Victoria Land, 72° south, could find no harbor. Every indentation in the coast was filled with ice and drifted snow, to the depth of hundreds of feet. There was nothing to anchor to and no spot for human feet. At Upernavik, in Greenland, the same distance north, is a fisherman's village, and a summer of two to three months. Ross tried very hard to penetrate further south, but he was opposed by an ice barrier, without a break for 450 miles, and with precipitous edges over 180 feet in height. *Antarctic winter scenes have never been sketched, for no man has dared to stay in their midst.* Nature seems to say, in blasts of her southern seas, and crash of their icebergs, 'Thus far shalt thou come, and no further.'"—Heavens, Earth and Ocean, by James P. Boyd, A. M., 1887, pp. 665 to 830. Also Cook's Voyages, pp. 248-280.

"The earth is three million miles nearer the sun in winter than in summer."—Quackenbos' Natural Philosophy. *Observe* that this is said to be the case at the middle of the southern summer (our winter), and that the South Pole (?) is then inclined *toward* the sun!

"If the earth were a perfect sphere, without elevations and depressions, the depth of the entire volume of water

would be about 10,000 feet."—Question Book on Physical Geography, by Asa H. Craig, p. 262.

"Mt. Ararat, in Asia, is 17,210 feet high; Mt. Everest, 29,100; Mt. Aconcagua, S. A., 23,100 feet."—Mitchell's Geography, third book, 1872.

(Now, there was a great flood one time.) "And all the high hills that were under the whole heavens were covered."—Gen. 7: 19. The earth being a plane, "stretched out upon the seas, (Bible) the fountains of the great deep were broken up," and as the waters rushed in from the south expanse, they covered the earth like the ship borne down by the waves! Nothing else accounts for the vast animal deposits about the north. The incoming waters conveyed them there, and as the waters "returned to the place from whence they came," very naturally left these deposits.

"These eruptions and retreats of the sea, have neither been slow nor gradual; most of the catastrophes which have occasioned them have been sudden. Traces of the Antediluvian deluge are very conspicuous. In the northern regions it has left the carcasses of some large quadrupeds, which the ice has preserved, with their skin, hair and flesh. [Doubtless these were preserved in evidence, to witness to the truth of God's Word.—Gleason.] The elephant found near the mouth of the Lena, by Mr. Adams, in 1799, was in such high preservation that its flesh was eaten by dogs."—Buffon's Natural History, p. 35.

"The greatest wonder of this bleak coast is its wealth of mammoth tusks. Along the shores of the Obi, Yenisee and Lena, and the shores of the Polar Ocean are found the remains of a species of elephant, imbedded in the frozen soil or in the ice. In one of the Lachow Islands was found a deposit of mammoth bones of remarkable richness. In 1821, 20,000

pounds of fossil ivory were taken out, and the supply seemed inexhaustible. Not only fossil horses, buffaloes, oxen and sheep have been found, but wood imbedded in the soil. The sandstone of the high hills embraces woody beams and trunks."—Lands of the Midnight Sun, pp. 809–811. James P. Boyd.

"Here we first got a cloudy, vague idea of what had passed in the big world during our absence. The fiction of its rotation had not much disturbed the little outpost of civilization."—Dr. Kane, 1855, at Upernavik.

"The sun, moon and stars were regarded as subsidiary to the earth. There seems to be traces of the idea that the world was a disc."—Smith's Bible Dictionary, p. 155.

Astronomers are wont to be very precise in their calculations, and boasted of their discovery of Neptune by prediction and calculation. It has been so taught in the schools. But, see Mitchell's Astronomy, p. 275. He says: "The real planet was found five billion miles distant from where the computed one was supposed to be."

"M. A. W.—'Please tell me two things. First: Who discovered that the earth was round? Second: How can we prove by observation that the earth revolves upon its axis?' *The World* does not know, and never heard tell of anyone who could answer your questions."—New York *World*, Jan. 22, 1890.

"M. W.—The exact diameter of the earth taken through the poles, is given out by astronomers at 7898.8809 miles, and at the Equator at 7924.911. This is simply scientific swindling, nothing more nor less. It is a matter of theory only, and the bunco-steerers in science, and particularly in astronomy, have things quite their own way."—New York *World*, April 15, '91.

"L. B.—No one ever yet ventured a plausible theory to account for the gulf stream. Each theory put forward neglects

some vital fact. The rotation of the earth, the specific gravity of the differently warmed waters, and surface winds, have each in turn been proposed and abandoned. Capt. Nares' report in 1874 (Challenger), shows that the three cannot even be combined. The least expansion of the Atlantic Ocean from heat is under the Equator, at 7° S., and there is more warm water at 23° N. than at the Equator. At 38° N. the Atlantic is three and one-half feet higher than at 23° N., two and one-half feet higher than at the Equator, and if gravity compels water to run down hill then the gulf stream should flow the other way, while the 'Equatorial bulge' is in the temperate zone."—New York *World*, 1890.

"They may be forced up northward by the cooler waters from the frozen southern seas spreading northward under the surface of the ocean, the earth being a plane. But 'gravity' knocks out the 'popular' theory."—"Mostly Fools."—Carlyle.

"The wisdom of this world is foolishness with God." (1 Cor. 3:19.) "Let God be found true, but every man a liar, that God may be justified in His ways." (Rom. 3:4.) "For, saith the Lord, as the heavens are higher than the earth, so are My ways higher than your ways, and My thoughts higher than your thoughts." Isaiah.

> "See! and confess, one comfort still must rise;
> 'Tis this—though man's a fool, God is wise."—Pope.

"The Bible is a book worth all other books which were ever printed."—Patrick Henry.

"The very first verse of Scripture is perhaps the most weighty ever uttered or penned; which, setting forth the five grand subjects: God, Creation, Heaven, Earth, Beginning, is the germ of all philosophy and science, known and unknown, visible and invisible."—Rev. W. Brookman, Toronto.

"Science in all its branches must ever be found to possess

its origin in the Word of Truth. Such a principle may be opposed, and clouded over by the temporary force of human imaginings; but sooner or later the Bible will be confessed to have been 'written for our instruction, and that whatsoever things were written aforetime were written for our learning.'"
—Greershom.

"Many things that we now call discoveries are, strictly speaking, recoveries and restorations of the past. There is no truth which is new; falsehood alone permits of invention, and is therefore evanescent and temporary, while Truth is eternal—'the same yesterday, to-day, and forever.'"—Parallax.

"I would rather have one little promise in the corner of the Bible, than all the statements and theories of all the philosophers that ever lived. The history of philosophers has, in brief, been the history of fools. Each contradicts the other, and not a moon changes but finds a change in their doctrines."
—Rev. C. H. Spurgeon.

It has ever been thus. Like the sands on the shore of the sea, they are continually shifting; has been the philosophy, learning and religion of the Mystics, the Pagans, the Greeks, and the Romans. What was once proclaimed from the high places, and believed on in the world so confidently, that he would be sent to the dungeon who would dare dispute it, is now so strongly condemned by the world that he would be put out of the synagogues of men who would dare believe it. But through all the rise and fall of the ages, and whilst system after system of the philosophy of the sages has had its day, and tumbled into the abyss of its predecessors, the Bible, effulgent with sparks of Divinity, has presented one unsullied and unbroken chain of harmony, which shall, after the fullness of time of iniquity, bind Satan and his kingdom, and justify God as supreme.

And it is not to be wondered at that the school of modern philosophers has been able to add but little to, while they have borrowed much from, the records of the Ancients, who for fifty-five centuries held to the even tenor of the Scriptures. Let us see. The signs of the zodiac were known to them as far back as the Chaldeans. They divided the heavens into constellations; they discovered the planetary revolutions and periods; they discovered the great Lunar cycle of a little more than eighteen years, on the completion of which Solar eclipses occur; they as accurately calculated Lunar eclipses, though they believed neither the theory of the sphericity of the earth, nor the theory of a stationary sun and a revolving earth. They were aware of the practical immobility of the Pole Star; they knew that the heavens completed a diurnal revolution in four minutes less time than the sun, and hence that the sun lost a complete revolution on the stars in a year; they knew the moon lost a revolution on the stars in twenty-seven and one-half days, and on the sun in twenty-six and one-half days, though these facts did not make them conclude that the sun and moon were going backwards. They discovered so-called "precision of equinoxes," and knew that the sun was longer, by eight days, north of the Equator than he was south of it. Now, what do modern astronomers know, more than these things? With the possible exception of Uranus and Neptune, they have given us little else than planetary speculation on the hypothesis of Copernicus. The fact is, that they being called "astronomers," and having been caught in the popular drift of science, and being entangled thereby, go on, of necessity, bringing forth one absurdity to support another, till their system of astronomy is not held together even by a fabric of the most base suppositions. They take up the terms "attraction" and "gravitation," and spin our supposed "ball" through space "with the rapidity of

lightning," pushing, hauling and dragging with it the moon, the atmosphere and oceans; while clouds and currents of water are running undisturbed, at the same time, toward every point of the compass, without splitting the ball, as the natural result of such rotation would be, into myriads of atoms, or sending broadcast through the universe a multitude of fiery meteors; but holding all "unperceived," by "gravitation" and "attraction," from a source a hundred millions of miles away, when no gaseous or luminous bodies have ever been found to possess attractive power!

We can readily understand why we may swing a pail of water in a circle about our head, but how the pail can perform the revolution without the arm, or the water go around without the pail, is a matter that none but modern astronomers could dare declare, much less believe!

Now, nothing seems plainer to me than that the facts are opposed to the theories, hence the theories must be wrong, and, if wrong, Zeteticism and the Bible is most likely right; if right, school children should no longer be compelled to believe that which astronomers have long known they cannot prove—a supposition to be a fact. Indeed, we think that we have reasons to believe that in the coming generations, the iron-bound shackles of prejudice and ignorance will be thrown off, and that the living objections now in the way of God's truth, will be removed by Father Time; that the throbbing that has sent the spirit of inquiry into the channels of intelligence will lead on, till once again shall be proclaimed that "Truth crushed to earth will rise again."

R. E. L. J. LOVELL.

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How the Continents Attract Seas.

"The effect of gravitation in heaping up the sea waters upon the shores of continents is one of the most interesting, as well as the most curious and least considered facts in connection with old ocean's history. Thus the continents are all situated at tops of great hills or mountains of water, and to cross the Atlantic or any other ocean the ship has first to go down the sloping sheet, cross the valley and then climb the mountain of water on the other side before it safely reaches a harbor.

"In this connection the interesting calculation has been made that in mid-ocean on the Atlantic the depression is about three-fourths of a mile below the level of the water at coast line, while a ship in traveling from San Francisco to Yokohama, Japan, must cross a valley at least a mile in depth."—*St. Louis Republic.*

How does the above harmonize with the globe theory? —Author.

	Degrees North of the Equator.	Miles.	Degrees South of the Equator.	Miles.	
North Pole	90°	0			
	85°	3⅓	5°	63⅓	
	80°	6⅔	10°	66⅔	
	75°	10	15°	70	
	70°	13⅓	20°	73⅓	
	65°	16⅔	25°	76⅔	
	60°	20	30°	80	
	55°	23⅓	35°	83⅓	Cape Town 82.
	50°	26⅔	40°	86⅔	
North Lat.	45°	30	45°	90	South Lat.
	40°	33⅓	50°	93⅓	
	35°	36⅔	55°	96⅔	
Cape Town 34°22'		37			
	30°	40	60°	100	
	25°	43⅓	65°	103⅓	
	20°	46⅔	70°	105⅔	
	15°	50	75°	110	
	10°	53⅓	80°	113⅓	
	5°	56⅔	85°	116⅔	
Latitude of the Equator.	°	60	90°	120	South Circumference.

Fig. 43.

Diagram No. 43 will be found convenient for getting the longitude in miles of any meridian north or south of the Equator. As the earth has been repeatedly proven to be a plane, the lines of longitude are therefore straight, and they continue to diverge from each other at the same ratio as we go south, south of the Equator, as they do from the North Center or Pole to the Equator. It will be seen, that for every *five degrees of latitude,* there is an existing divergency of three and one-third miles.

Example: Commence at the top of the left hand column 90° and read to the Equator 0°—60 miles. Next, for southern distances, take the two right hand columns and read downward.